



# **ENVIRONMENTAL TECHNICAL SERVICES**

AN ENVIRONMENTAL CONSULTING FIRM

(800) 200-4ETS

2007 - 2008 ANNUAL REPORT  
DOCUMENTING THE IMPLEMENTATION OF THE  
OPERATIONS AND MAINTENANCE PLAN

**FORMER HECKATHORN NPL SITE**

**Located At The**

**LEVIN-RICHMOND TERMINAL CORPORATION  
402 WRIGHT AVENUE  
RICHMOND, CALIFORNIA**

July 1, 2008

# LEVIN RICHMOND TERMINAL CORPORATION

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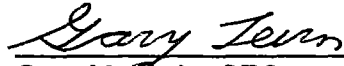
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SFRWQCB Case Manager: Mr. Rico Duazo

July 1, 2008

I, Gary Levin, certify that Environmental Technical Services (ETS) is an authorized representative of the Levin Richmond Terminal (LRT), and performs oversight of the Stormwater Program including reporting.

I certify under penalty of law that this document, "Implementation of the Operations and Maintenance Plan, 2007-2008" and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or the persons directly responsible for gathering the information, the information submitted is to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

  
\_\_\_\_\_  
Gary M. Levin, CEO  
Levin Richmond Terminal Corp.  
Attorney at Law

*7/1/2008*  
Date:

# **ENVIRONMENTAL TECHNICAL SERVICES**

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July 25, 2008

Levin Richmond Terminal Corporation  
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Attn: Gary M. Levin

REFERENCE: Levin Richmond Terminal Corporation  
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Facility WDID No: 2 071002394  
SFRWQCB Case Manager: Mr. Rico Duazo

I, Helen Mawhinney, certify under penalty of law that I have prepared the Levin Richmond Terminal Annual Report, "Implementation of the Operations and Maintenance Plan, 2007 – 2008" and have completed or reviewed all attachments and that they are true and accurate.

The information submitted is to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

  
Helen Mawhinney  
Environmental Technical Services  
Senior Environmental Specialist

7/25/08  
Date:

# **ENVIRONMENTAL TECHNICAL SERVICES**

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2007 - 2008 ANNUAL REPORT  
DOCUMENTING THE IMPLEMENTATION OF THE  
OPERATIONS AND MAINTENANCE PLAN

## **FORMER HECKATHORN NPL SITE**

Located At The

**LEVIN-RICHMOND TERMINAL CORPORATION  
402 WRIGHT AVENUE  
RICHMOND, CALIFORNIA**

*Gary M. Levin*

Gary M. Levin  
Levin Richmond Terminal

*7/11/2008*

Date

*Helen Mawhinney*  
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Environmental Technical Services

*7/25/2008*  
Date



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## **1.0 INTRODUCTION**

This document is prepared for submittal to the United States Environmental Protection Agency (U.S. EPA), Hazardous Waste Management Division. Levin-Richmond Terminal Corporation (LRTC), in compliance with the State of California General Stormwater Permit for Discharges of Stormwater Associated with Industrial Activities (General Permit), has performed activities that are included in its Stormwater Monitoring Plan (SWMP). The SWMP also provides the basis for the evaluation of compliance with the General Permit and Stormwater Pollution Prevention Plan (SWPPP). The combination of the SWMP and the SWPPP comprise the stormwater monitoring and pollution prevention plans for the entire 40-acre site and the facilities owned and operated by LRTC.

As required by the U.S. EPA Consent Decree, dated April 22, 1996 and the completed Upland Cap Installation, Former United Heckathorn Facility, Richmond, California, the Operations and Maintenance Plan (O & M Plan) describes the procedures for the long-term management of the upland capping system at the 4.5-acre Heckathorn NPL Site. The results of inspections, monitoring, and maintenance of the cap and drainage system are documented within this Annual Report. The upland remedy implemented by LRTC and Levin Enterprises Inc. was approved on September 30, 1999. There were no activities to report for the period ending June 2001 and LRTC began annual reporting for its fiscal year commencing July 1, 2001 through June 30, 2002. Submittal of Annual Reports is made for the reporting periods ending June 30 of each year. All referenced reports and documents are available at LRTC and are available to the U.S. EPA and its contractors upon request.

This document presents the June 2008 summary of recent inspection and maintenance by LRTC of the cap and associated stormwater interceptors.

### **1.1 Background**

Environmental Technical Services (ETS) prepared and caused to be filed, on behalf of LRTC, the 2007-2008 Annual Report for Stormwater Discharges Associated with Industrial Activities, for the period ending June 2008. During the 2007-2008 reporting period, no changes have been made to the Heckathorn NPL Site, including but not limited to material processes, capping, interceptors, and site construction. Site observations, monitoring, and "Good Housekeeping Practices" are performed on a daily basis.

### **1.2 Current Site Use**

The Levin-Richmond Terminal Corporation operates a dry-bulk marine terminal encompassing approximately 40 acres. LRTC's activities include the handling and storage of dry bulk materials, including: steel scrap, aggregates, metallurgical coke, petroleum coke, coal, eucalyptus wood chips, dry distilled grain, sand, and bauxite. The bulk cargo is either directly loaded into vessels; or

stockpiled onsite and loaded onto vessels; or unloaded from vessels to rail cars and trucks. The capped section of the former Heckathorn Site is used for stockpiling cargo and railroad operations.

## **2.0 CAP AND STORMWATER INTERCEPTORS**

### **2.1 Description of Capping System**

#### Concrete Cap

The concrete cap is located in the upland area of the former United Heckathorn Facility. The concrete cap consists of a minimum of six inches of concrete aggregates with reinforcing steel wire. The reinforcing steel consists of a double layer of 6' by 6' W4.5 X W4.5 steel-welded wire fabric (WWF). In some areas the cap overlies asphalt. In the other areas where asphalt does not exist, the cap overlies a double layer of 4-inch by 4-inch W4.5 X W4.5 WWF upon a compacted grade. In these areas the sub-grade was prepared and compacted according to the specification approved by the U.S. EPA.

#### Geotextile Fabric and Gravel Cover

Some areas of the upland cap adjacent to railroad tracks and switches, where the storage and handling of bulk materials do not occur, were covered with a geotextile fabric and gravel. These areas consist of soils potentially containing pesticides. The geotextile membrane and six-inches of clean imported gravel cover these soils.

#### Stormwater Collection within Interceptors SW-3 through SW-7

The cap contains a stormwater collection system with five large interceptors (retention basins) engineered and constructed according to the specification approved by the U.S. EPA. The interceptors are identified as SW-3 through SW-7.

### **2.2 Inspection of Cap**

The concrete cap was inspected by John Peterson for Buster Building, General Contractor, License No. 513203 C8 (concrete), on May 11, 2008, and found to be intact and in good condition. Also, the cap was inspected quarterly by Environmental Technical Services (ETS) while performing stormwater and "Good Housekeeping" observations. The cap was found to be uncompromised with only occasional surface "feather" cracks typical of those that develop subsequent to the curing of freshly poured concrete. The cracks are insignificant and not indicative of stress fractures. These surface cracks are too small to repair. Refer

to Attachment B for the Buster Building, General Contractor, Report of Cap Inspection, May 11, 2008.

### **2.3 Inspection of Drop Inlets and Interceptors**

Visual observations of stormwater runoff and stormwater systems are performed on an as-needed basis during shipping activities, periods of significant rainfall, and dry and wet seasons. Work areas and surface conditions are inspected on a daily basis and the entire site is cleaned using LRTC's power vacuums and sweeper brooms as part of LRTC's routine housekeeping. Site surfaces are kept clean to ensure that sediment and contaminants do not enter nearby surface waters.

LRTC's staff and Environmental Technical Services (ETS) perform site observations. ETS has been retained to perform random site inspections and to advise LRTC as to effective pollution prevention improvements. American Textiles, a pollution absorbent/prevention materials expert and vendor, performs site inspections during the wet season to evaluate the condition and placement of absorbent snakes, socks, pads, and fabrics.

LRTC's Stormwater Pollution Prevention Plan includes the inspection and documentation of drop inlet and interceptor conditions each quarter, each dry season, and annually. Monthly inspections are required during the wet season. LRTC and ETS have elected to document all inspection results on a monthly basis. The results are included in the Annual Report for Stormwater Discharges Associated with Industrial Activities

### **2.4 Purging and Cleaning of the Storm Drains**

Plans for the annual cleaning of five stormwater interceptors were developed by LRTC's personnel with Environmental Technical Services in June 2003. Storm drain cleaning was increased to several times throughout the year beginning in June 2005 and remains an active part of LRTC's SWPPP. The interceptors are emptied on an-as-needed-basis to eliminate stormwater discharge.

Composite water samples were collected from interceptors SW-3 through SW-7 on November 15, 2007; January 10, 2008; March 27, 2008; and April 28, 2008 (designated as No. LRTO SW-3 through SW-7).

Following receipt, the laboratory analytical results were presented to the City of Richmond Waste Water Division, Pretreatment Program, to determine whether the water removed from the stormwater interceptors could be discharged into the sanitary sewer. Upon approval, the City of Richmond inspected the storm drains and sanitary sewer, and discharge was approved under LRTC's Industrial Discharge Permit. The Waste Water Division was notified 48-hours prior to the start of each project to allow for city inspection.

LRTC's OSHA certified personnel emptied and cleaned interceptors SW-3 through SW-7 under a site-specific Health and Safety Plan. LRTC pumped water from the interceptors utilizing a specially equipped water truck. Water was discharged from the water truck directly into the sanitary sewer. Sediment was removed from the interceptors using stormwater to liquefy the sediment, which was then pumped into the vacuum truck. Sediment was released from the truck into a concrete pit away from the drop inlets where it was allowed to dry, be tested, and then disposed of at a qualified landfill. Subsequent to emptying, each interceptor's floor and sidewalls were pressure-washed. This process was repeated until all sediment had been removed and the cleaning of each interceptor complete.

## **2.5 Collection of Stormwater Samples Prior to Cleanout**

A composite stormwater sample was collected on November 15, 2007; January 10, 2008; March 27, 2008; and April 28, 2008, by lowering a clean sample bottle into standing water within the last chamber. The bottle was allowed to fill with stormwater, which was then decanted into appropriately preserved sample bottles. Three discrete, 40-ml, Volatile Organics Analysis bottles were filled from each interceptor, to be composited by a State-certified analytical laboratory as one sample for analysis. Stormwater samples for all other analyses were composited during field sampling. This was accomplished by collecting equal amounts of water from each interceptor within a laboratory supplied clean 2.5-gallon Teflon container. Upon completion this water was then decanted into sample bottles. Certified clean, properly preserved bottles were supplied by a state-certified analytical laboratory.

Each sample bottle was labeled with LRTO as the project name, stormwater system identification number, sampler's name, date, time, and preservative. The samples were placed within a cooler on ice, and transported to Entech Analytical Labs, Certificate No. 52486 or Accutest Laboratories, Certificate No. 2346, under chain of custody, within the sample's holding time.

## **2.6 Analyses**

The composite stormwater samples were analyzed as requested by the City of Richmond, Waste Water Division in order to obtain approval for discharge into the City of Richmond's sanitary sewer system.

The samples collected on October 3, 2007; November 15, 2007; January 10, 2008; and March 27, 2008 were analyzed for oil and grease (O&G, using EPA Method E1664); total petroleum hydrocarbons as gasoline (TPHg, using EPA Method 5030/8015); benzene, toluene, ethylbenzene, total xylenes, and MtBE, (BTEX and MTBE, using EPA Method 5030/8021); Specific Conductance (SC, using EPA Method 120.1); pH (using HYDAC pH meter); copper, lead, nickel,

and zinc (Cu, Pb, Ni, Zn, using EPA Method 200.7); total suspended solids using EPA Method 160.2); and biological oxygen demand (BOD, using EPA Method SM5210B).

Stormwater samples collected on November 15, 2007; January 10, 2008; March 27, 2008; and April 28, 2008 were analyzed for pesticides (using EPA Method SW8081A); samples collected on January 10, 2008, March 27, 2008, and April 28, 2008 were analyzed for PCBs (using EPA Method 8082).

### **3.0 NO OUTPOUR OF STORMWATER FROM INTERCEPTORS SW-3 THROUGH SW-7**

Rainfall did not occur through June 30, 2008 in quantities sufficient to create an outpour of stormwater from interceptors SW-3 through SW-7. LRTC's personnel were able to empty all stormwater and sediment from each interceptor prior to fall rainfall, allowing LRTC to enter the rainy season with dry interceptors. The practice of emptying interceptors SW-3 through SW-7 several times throughout the rainy season allowed LRTC to avoid stormwater discharge into the Lauritzen Channel. Pumping and discharge of stormwater into the City of Richmond's sanitary system is scheduled to be repeated prior to every wet season and during seasonal rainfall.

### **4.0 BETTER BUSINESS PRACTICES / GOOD HOUSE KEEPING**

Levin-Richmond Terminal Corporation continues to work closely with Environmental Technical Services to improve and upgrade each site process that could adversely impact the environment. Improvements are not limited to but include the following:

#### **4.1 Significant Materials**

Stockpiled bulk materials are bermed, using ten-foot high jackwalls. Subsequent to jackwall placement, fork pockets, used for their repositioning, are sealed with gaskets. Coal and Green Coke stockpiles are sealed using SoilSement. All of the stockpiles except Dry Distilled Grain (DDG) are misted with water to decrease airborne particulates. DDG is stored indoors within the Hopper Building. Should runoff from the stockpiles occur, the water is vacuumed and recycled back onto the stockpiles by spraying. This is performed using a vacuum/water truck.

Chemical "Significant Materials" are related to the maintenance, repair, and fueling of vehicles and materials handling equipment. Chemicals are stored in enclosed areas and transported in spill-resistant containers, using double containment tubs, drip pans, and pollution prevention materials as needed to eliminate drips, spills, and leaks.

## **4.2 Federal Standard for Non-Road Engines, Emissions Reduction**

In 2008, LRTC implemented a policy that all vehicles and equipment purchased will be compliant with Federal Standards (Tier 3 or better) for Non-road Engines.

## **4.3 Street Sweeper**

In 2001, LRTC purchased an in-house Tennant truck-mounted vacuum power sweeper, which is scheduled to perform daily sweeping of outside surface areas, and cleanup following the unloading and loading of ships. The sweeper is also positioned and manned during appropriate cargo operations to assist in any necessary cleanup.

A second vacuum power sweeper, manufactured by Sentinel, was purchased by LRTC and has been working onsite since January 1, 2004.

## **4.4 Vacuum Truck**

In 2008, LRTC purchased a Veermer 500 trailer-mounted vacuum compliant with Federal Standards (Tier 3 or better) for Non-road Engines. The vacuum is equipped with a high pressure water spray.

## **4.5 Brooms**

LRTC operates two (2) IT-28 tractors with broom attachments to perform clean up of the capped surface following cargo operations.

## **4.6 Water Truck**

An LRTC water truck has been converted to pump and contain water from interceptors SW-2 through SW-7 prior to permitted discharge into the sanitary sewer. This prevents the stormwater within interceptors SW-3 through SW-7 from reaching levels that would outflow into the Lauritzen Channel.

A Klein 2,500-gallon water truck has been ordered with rear sprays to wet the road, side sprays and a water canon to spray the stockpiled bulk materials, and front sprays to wash the roads. The truck is equipped with a pump to vacuum water out of the stormwater interceptors during cleanout events.

## **4.7 Hay Bales**

Hay bales/swaddles are placed around the perimeter of each interceptor and storm drain that is not raised. Interceptor SW-3, located near the hopper building, is covered with plastic when the hopper is in use to prevent dropping material from the hopper onto the interceptor. The steel plate covering interceptor SW-7 has a tight seal, making it unlikely that material would enter the



basin; covering the interceptor is an added precaution. All drain inlets are sealed with plastic sheeting or sediment-proof fabric and hay bales throughout the dry season.

Daily inspections are conducted by LRTC's supervisors of all working stockpiles, mobile equipment, and conveying equipment. LRTC's supervisors and employees attempt to eliminate the buildup of material on jackwalls, equipment, roadways, and surfaces. There is constant attention to leaks and spills. Small spills are given the same attention as large spills.

Jackwalls are placed around stockpiles for containment. Hay bales and absorbents are used when appropriate.

Hay bales and K-rail have been placed in the east Parr Yard on property boundaries adjacent to the Parr Canal to prevent stormwater from flowing into the bay.

#### **4.8 Absorbent Materials**

American Textile is retained to place absorbent snakes, socks, pillows, and filters around and within each interceptor and storm drain. The absorbent materials are photosensitive and have a limited life span. Each absorbent type is closely monitored and on a replacement schedule. The absorbent materials are white, allowing easy detection of saturation with waste.

Emergency spill response stations have been placed strategically throughout the site in close proximity to areas where potential contaminants are used or stored. Cleanup materials are located in each work vehicle. These materials are stored in foil factory sealed bags to maintain their integrity. Ample supplies of absorbent booms are stored at LRTC.

A Dock Emergency Response Station has been established to efficiently organize access to adequate cleanup supplies.

Exposed soil and ties beneath railroad car "parking stations" have been covered with "Trackmat," an absorbent fabric barrier, prescribed and provided by American Textiles. This material is scheduled for routine replacement.

American Textiles, with Environmental Technical Services, inspects LRTC's absorbent supply and placement at the beginning of each wet season, and then instructs as to effective changes in material, quantity, or placement, which could increase filtration efficiency.

The absorbent materials are photosensitive and have a limited life span. Each absorbent type is on a replacement schedule and closely monitored. The absorbent materials are white, allowing easy detection of saturation with waste.

Throughout the wet season, hay bales and absorbents surround each drain inlet. Drain Guards have been placed within all drain inlets located on the former Heckathorn facility parcel. Each inlet is sealed with plastic and/or Extech fabric.

Stormwater runoff must flow through fabrics and absorbents prior to entering the stormwater interceptor or drain outflow. Additional hay bales, sediment pillows, and absorbent materials were added to these areas during the wet season's loading and unloading activities.

During the dry season interceptors were sealed by pressing hay bales, absorbents, and Extech fabric tightly against each system's inflow. Inflow grates flush with grade are sealed with plastic sheeting. Where traffic allows, each grate is covered with, and surrounded by, hay bales.

The absorbents used are as follows:

- Hay Bales (placed around drain entry and areas of inflow to storm drain systems).
- Oil Absorbent Socks (placed inside and outside of hay bales and drain entry).
- Absorbent Diapers (placed within storm drains).
- Sediment-proof fabric is placed over each drain entry.
- Drainguard Catch Basin Insert (funnel placed at drain entry with an absorbent pillow inside).
- UltraGuard Socks (attached to each drain outflow pipe). The socks are constructed using a sediment-proof fabric to capture suspended solids. The sock end, in which solids collect, lies on the ground.
- Track Mats (Hydrocarbons absorbent) are placed on the railroad track floor where railcars are parked between projects.
- Extech Fabric (placed over drain inlets). This fabric is manufactured to allow water flow through the fabric while trapping hydrocarbons, metals, and sediment. The fabric is currently used to cover drain inlets throughout the wet season.
- Environmental Technical Services has been retained to perform documented monthly site inspections of BMPs and stormwater systems.

The monitoring and upgrading of stormwater systems is ongoing. The upgrading of systems includes, but is not limited to: constructing primary stormwater

interceptors and secondary sediment basins, covering stormwater runoff drainage trenches with asphalt/concrete, constructing curb to direct drainage, replacing deteriorated asphalt, constructing concrete driveways, sealing drain inlets with hay bales and/or plastic sheeting, building concrete berms to control stormwater run off, and increasing the scheduled emptying and cleaning of stormwater systems.

#### **4.9 Interceptor Improvements**

##### **SW-1**

All basins and the primary interceptor associated with stormwater system SW-1 were emptied and cleaned during the 2007-2008 reporting year to minimize contaminants.

In 2004, the stormwater collection trench, which flowed to monitoring point SW-1, was upgraded by sealing the trench surface with asphaltic concrete. The trench was excavated at seven locations and sump basins constructed to allow the settling of sediments onto the basin floors. Surface cleanout grates were installed at grade. The storm drain interceptor system was thoroughly cleaned and upgraded with four new baffles, five compartments, and covered with steel plates.

Beginning in 2006, Extech fabric was placed within each drain inlet. To decrease the entry of the three largest inlets and allow complete fabric coverage, steel inserts were constructed and placed within the drain entry. New hay bales were continually placed along the perimeter of each drain inlet. Additional absorbents were placed within the last interceptor compartment.

An Ultraguard Sock was placed over the interceptor's inflow and outflow pipes to decrease suspended solids.

In 2008, Buster Building, a general contractor, capped the embankment beneath the outflow pipe with concrete. Steps were constructed allowing access to stormwater outflow for the collection of stormwater samples. An UltraGuard Sock was placed on the interceptor's outflow pipe to capture suspended solids, metals, and hydrocarbons. The Sock lies on the concrete surface, eliminating the potential for cross contamination by exposure to surface soil and allowing for the placement of stormwater pollution prevention materials. As stormwater discharges through the sock, it is directed by a concrete swale into the appropriate sample containers.

Wright Avenue was bermed at a low point, and the curbing at the property line was improved. Additional berming was added to all equipment and storage areas.

To prevent dust and debris from entering storm drains during the dry season, all associated openings were sealed using plastic, hay bales, and/or Extech fabric. Stormwater pollution prevention materials remain in place throughout the year should off-season rainfall occur.

All basins and the primary interceptor associated with stormwater system SW-1 were emptied and cleaned during the 2007-2008 reporting year to assist in decreasing contaminants

## SW-2

Interceptor SW-2 was upgraded to an aboveground interceptor in 2001, and constructed with three-tiered baffled chambers to allow the settling of sediments into the chamber floor.

In 2002, a concrete berm with a small opening was constructed around the interceptor's perimeter. Hay bales and absorbents surround this opening, creating a filtration system. Stormwater runoff must flow through the opening prior to entering a second filtration system surrounding the interceptor's inflow.

Additional hay bales, swaddles, sediment pillows, and absorbents are added to this area during loading and unloading operations occurring in the wet season in order to collect sediment prior to entering the interceptor.

An Ultraguard Sock was placed on the cane pipe, which transports water from the second to the third and final chamber, to collect suspended solids and decrease contaminants before stormwater discharges into the bay.

All basins and the primary interceptor associated with stormwater system SW-2 were emptied and cleaned during the 2007-2008 reporting year. Absorbents were replaced within each system's inlet(s). Also, inlets were covered with plastic sheeting and/or hay bales during site operations.

All associated openings are sealed using plastic, hay bales, and/or Extech fabric during the dry season to keep interceptors clean. Pollution prevention materials remain in place throughout the year.

In 2006, a steel, quick release door was constructed at the drain entry to SW-2 allowing immediate closure by sealing the interceptor in the event of a non-stormwater release.

## SW-3 through SW-7

These stormwater systems did not have outflow during the two rainfall sampling events and therefore were not sampled for annual stormwater reporting. However, composite water samples were collected from interceptors SW-3

through SW-7 for the purpose of emptying and cleaning each interceptor. Laboratory analytical results were presented to the City of Richmond Waste Water Division, Pretreatment Program, and the interceptor's collected stormwater was emptied into the city's sanitary sewer under LRTC's City Industrial Discharge Permit.

All basins and the primary interceptors associated with stormwater systems SW-3 through SW-7 were emptied and cleaned multiple times during the 2007-2008 reporting year. These interceptors are scheduled to be emptied and cleaned several times throughout the year as part of LRTC's SWPPP. Also, the interceptors are emptied on an-as-needed-basis to eliminate stormwater discharge into the bay.

Absorbents were routinely replaced within each system's inlet(s). Inlets were also covered with plastic sheeting; Extech fabric; and/or hay bales during site operations. All associated openings are sealed using plastic, hay bales, and/or Extech fabric during the dry season to keep interceptors clean. Pollution prevention materials remained in place throughout the year.

#### Parr Yard - SW-8, SW-9, SW-10

Drain inlets SW-8, SW-9, and SW-10 were located in the West Parr Yard and have historically been included in LRT's stormwater monitoring program.

Interceptors SW-8 and SW-9 were removed by Eagle Rock during its construction project and replaced with Jensen Precast® stormwater systems. Eagle Rock is responsible for its stormwater program, including monitoring and reporting.

For construction purposes, Eagle Rock removed asphalt/concrete in the area of LRT's stormwater interceptor SW-10, allowing rainfall to be absorbed by exposed soil and eliminating stormwater runoff. SW-10 is now functional and is located within LRT's South Parr stormwater system.

#### South Parr Yard, PARR SW-10

In 2002, SW-10 was upgraded with an interceptor, constructed with three-tiered chambers, to allow the settling of sediments onto the chamber floor.

LRT recently resurfaced the area surrounding SW-10 with asphalt/concrete and included swales to direct stormwater into the interceptor. The swales also exclude runoff from the West Parr parcel. SW-10 is included in the South Parr Yard stormwater system and is now identified as PARR SW-10. The system is regularly inspected. The area that currently impacts PARR SW-10 is small and did not generate sufficient stormwater to produce discharge or to collect

stormwater samples. During the dry season pollution prevention materials will be placed to seal the stormwater system

#### South Parr Yard, PARR SW-11

The majority of the South Parr Yard is graded to direct stormwater into shallow swales that convey captured runoff into stormwater system that discharges into PARR SW-11. The PARR SW-11 system consists of eleven concrete vaults designated as PDI-1 through PDI-11.

CDS designed drain inserts PDI-1 through PDI-6 that are constructed with 4' X 4' concrete drain inlet vaults containing media filters and an oil/water separation curtain.

Drain inlet PDI-7 is constructed with 3' X 3', and PDI-8 through PDI-11 with 2' X 2' concrete vaults.

PDI-1 through PDI-11 are constructed to facilitate additional stormwater pollution prevention materials, such as: Drainguard Catch Basin Inerts; absorbent snakes, pillows, and diapers; Ultraguard Socks; and Extech Fabric. Drain inlets PDI-1 through PDI-11 connect to PARR SW-11, a port installed for the collection of stormwater samples. The system then connects to the City of Richmond's storm sewer culvert where stormwater runoff is released into the Parr Canal.

Stormwater system PDI-1 through PDI-6 was designed by CDS engineers to address potential environmental concerns regarding runoff containing debris, dirt, metals, oil and grease. The system consists of single chamber, precast concrete stormwater vaults equipped with a fiberglass curtain oil water separator and median filtration canisters. The curtain divides oil and water, as well as some dirt and grit. The canister filter is the system's primary means of providing filtration for higher levels of removal of very fine sediments and more complex water quality pollutant constituents. The filter media of choice used in the canister system is Perlite.

The quantity of filter canisters within each vault are as follows: PDI-1, no canisters at this time; PDI-2, five canisters; PDI-3, three canisters; PDI-4, three canisters; PDI-5, five canisters; PDI-6, one canister. The number of canisters is dependent upon a vault's location and the anticipated flow of water.

A stormwater sampling port, designated as PARR SW-11, was installed down gradient of the eleven drain inlets, prior to connecting with the City's stormwater system. All of the vaults are currently active; however, rainfall was not sufficient to produce outflow.

The media filtration system operates by filtering the stormwater through media-filled canisters. Stormwater runoff entering the media filtration system is diverted by a weir and flows to the portion of the vault beneath the canisters where larger

solids will settle and be trapped. The system is designed to allow approximately 3-gpm to flow through each cartridge while the water level is rising in the vault. Filtered water enters a perforated drain tube located in the center of the cartridge and flows to the collector manifold through a flexible pipe equipped with a "quick connect" coupling. The manifold is plumbed to a float-controlled slide gate that sets the overall operational control of the media filtration system to achieve a balance between flow and driving head level. The float is designed to fully open the slide gate as the water level reaches the top of the cartridges, allowing uniform and maximum exposure of the Perlite media to each and every cartridge filter. When stormwater runoff flows recede, the float-controlled slide gate will close until the next triggering runoff event.

#### **4.10 General Maintenance and Stormwater Improvements**

LRT maintains a log with various stormwater pollution prevention and site improvements documented. Included are increased draining and cleaning of stormwater interceptors, capping the South Parr Yard, construction of a stormwater system with concrete vaults containing oil water separators and median filtration systems and/or stormwater pollution prevention materials, capturing runoff from stockpiled bulk materials for recycling back onto the piles using misters, constructing a box to contain pollution prevention materials in the a stormwater outflow pipe, and continued training.

#### **4.11 Stormwater Systems, Cleaning Events Increased**

A stormwater discharge permit was obtained from the City of Richmond's Waste Water Treatment Program to empty and clean all interceptors several times annually. A water sample was collected from stormwater interceptor SW-2 on October 3, 2007. Composite water samples were collected from interceptors SW-3 through SW-7 on November 15, 2007; January 10, 2008; March 27, 2008; and April 28, 2008. The interceptors were drained and cleaned subsequent to approval from the City of Richmond.

On May 27, 2008, ETS obtained approval from the City of Richmond Waste Water Division, Pretreatment Program, to wash stormwater interceptors using tap water under LRTC's Industrial Discharge Permit. This will allow LRTC to cleanout the interceptors during periods of insignificant rainfall.

#### **4.12 Training**

On September 22 through 24, 2004, Blue Water & Associates conducted Hazardous Materials, Spill Emergency Response, OSHA CFR 1910:20 training at LRTC. Twenty-five LRTC employees completed certification. Annual training and certification are an integral component of LRTC's best management plan.

Training included, but was not limited to, the following:

- OSHA Hazardous Materials Standard
- Recognizing hazardous materials
- Hazardous materials basics, terms, and definitions
- Hazardous communications (HMIS, NFPA, MSDS's, DOT and ERG)
- Decontamination
- Toxicology, PPE,
- Confined space entry
- Department of Transportation exercises
- Spill control, containment, and cleanup
- Emergency procedures, and ICS

In January 2005, all LRTC supervisors were instructed by ETS in stormwater pollution prevention. The course included: Best Management Practices, regulations, surface water sensitivity, spill prevention, spill response, good housekeeping, pollution prevention, sampling and analyses, benchmarks, and reporting.

LRTC's stormwater pollution prevention supervisor, Tony Lester, attended additional Blue Water and Associates, Inc. training, including the Qualified Individual Workshop, June 25 and 26, 2003; and the 2005 West Coast Spill Response School, April 19 through 21, 2005.

A 2005 West Coast Spill Response School Training included, but was not limited to, the following:

- Site safety
- Initial response and assessment actions
- Boom design and strategy
- Maritime security concerns
- Oil spill simulations
- Skimmer design and strategy
- Alternate response options
- Oiled wildlife cautions
- Shoreline clean-up assessments (SCAT)
- Decontamination
- Spill impacts and cost concerns
- Survey of response equipment staging area
- Initial response strategies
- Site protection strategy deployment

BlueWater performed a refresher HazWoper training course on April 26, 2007.

In 2007, Tony Lester continued ongoing stormwater pollution prevention and sampling training through Environmental Technical Services. Tony manages and trains a stormwater maintenance crew of seven. Stormwater pollution prevention and spill response protocol are routinely discussed at LRT staff meetings.



In May 2008, Tony Lester and Helen Mawhinney attended a Bluewater seminar for readiness to spill response.

**Levin Richmond Terminal Trained Stormwater Pollution Prevention, Spill Response Team:**

<b>PERSONNEL</b>	<b>TITLE/POSITION</b>	<b>SWPPP RESPONSIBILITY</b>
Helen Mawhinney	Environmental Technical Services (ETS) Owner/Senior Environmental Specialist	Develop Stormwater Pollution Prevention Plan, Monitoring Plan, and Annual Report; supervise stormwater pollution prevention; perform random third party site inspections; direct stormwater supervisors in implementation of BMPs; conduct stormwater pollution prevention training, including sample collecting; perform stormwater sampling; monitor SWPPP materials placement; develop new BMPs, assist in implementation of current BMPs; and sample and profile yard sweepings
John Cackle	Levin Richmond Terminal (LRTC) Superintendent	Supervise stormwater program, review stormwater reports, report to CEO, support stormwater pollution prevention activities and personnel
Bill Buffalow	Director of Operations	
Tony Lester	Levin Richmond Terminal (LRTC) Operations Supervisor	Supervise stormwater pollution prevention; perform site inspections; direct employees in implementation of BMPs; perform tailgate meetings/briefings; conduct interim training; perform stormwater sampling; monitor SWPPP materials condition, inventory, placement; develop new BMPs, implement current BMPs; supervise maintenance of SWPPP equipment (sweepers, vacuum trucks, implement and supervise cleanout of stormwater systems
Jim Alexander James Parks Danny Flippen James Sanchez Don Nelson Mitch Moreno Terrell Smith	Levin Richmond Terminal (LRT) Operating Engineers	Clean and maintain SWPPP-designated storage room, sweep and clean site, clean oily equipment, maintain equipment, place oil pans/absorbents under equipment, replace SWPPP materials, clean stormwater systems

#### **4.13 Marine Spill Emergency Response**

LRTC has a verbal contract with NRC Environmental, an emergency response contractor, to immediately respond to an LRTC marine spill, should one occur. NRC Environmental provides 24-hour emergency response on both land and water. This contract includes providing emergency response vessels, personnel, absorbent consumables, and Coast Guard-approved oil containment boom.

The Coast Guard Marine Safety Office (MSO) requires each visiting cargo vessel to have an existing OSRO with an emergency response contract prior to the Coast Guard allowing entry into US Ports.

#### **4.14 Inspections**

Daily inspections of all working stockpiles, mobile equipment, and conveying equipment are conducted by LRTC's supervisors and employees for containment and cleanliness to eliminate the buildup of material on jack walls, k-rail, equipment, roadways, and surfaces. Small spills are given the same attention as large spills.

LRTC staff and/or Environmental Technical Services (ETS) perform site observations. ETS has been retained to perform site inspections randomly and to advise LRTC as to effective pollution prevention improvements. Lou Butty, of American Textiles, a pollution absorbent/prevention materials expert and vendor, performs site inspections during the wet season to evaluate the condition and placement of absorbent snakes, socks, pads, and fabrics.

#### **4.15 Railroad**

In order to improve surface runoff and replace deteriorating asphalt, two (2) railroad tracks with concrete street panels were installed at the intersection of Fourth Street and Wright, outside of the main entrance to Levin-Richmond-Terminal.

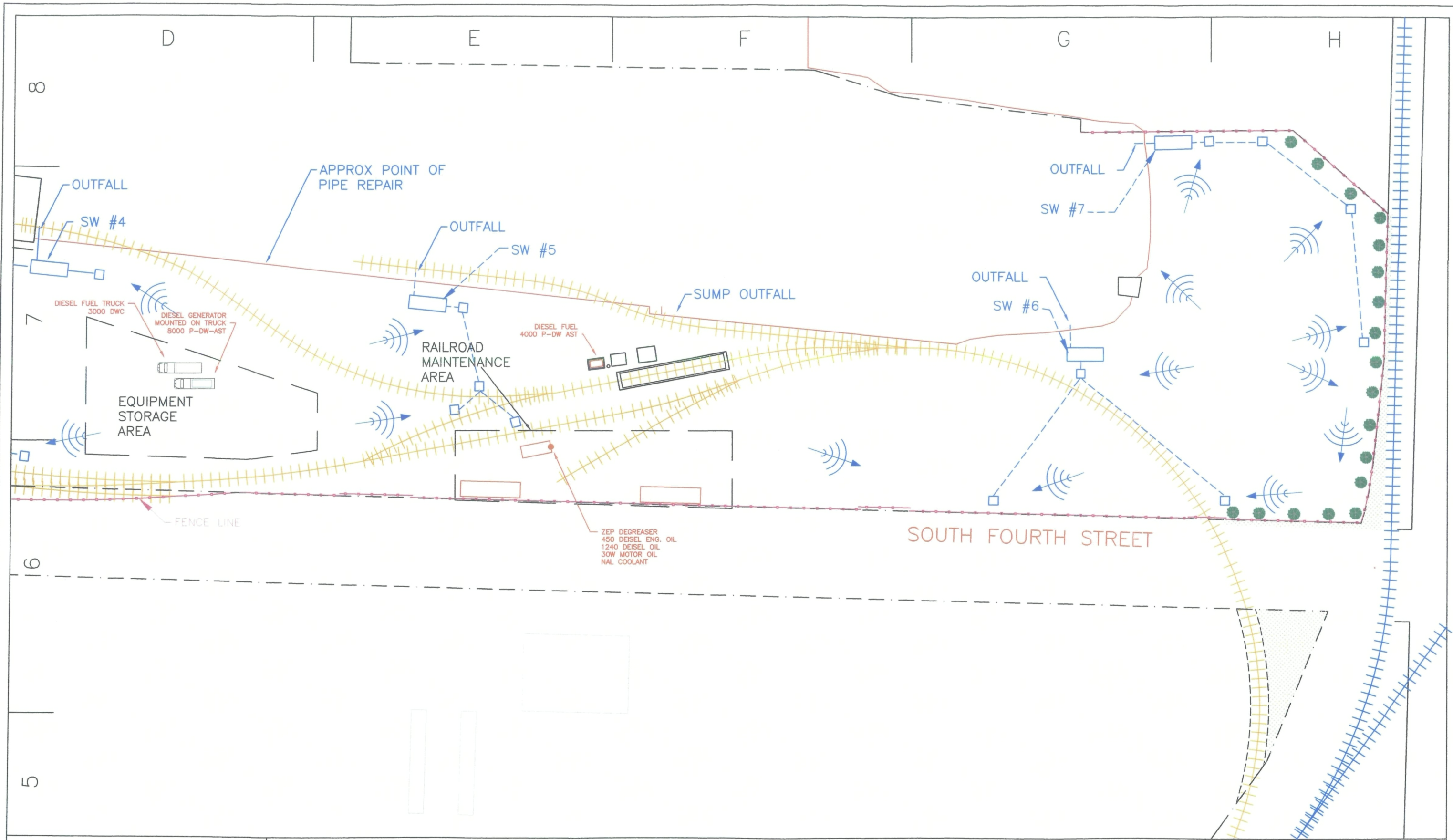
### **5.0 SUMMARY**

The finding and results submitted in this document satisfy the requirements of the Operations and Maintenance Plan, as stipulated by the U.S. EPA Consent Decree for the completed Upland Cap Installation for the Former United Heckathorn Facility, Richmond, California.

**ATTACHMENT A**  
**MAPS**





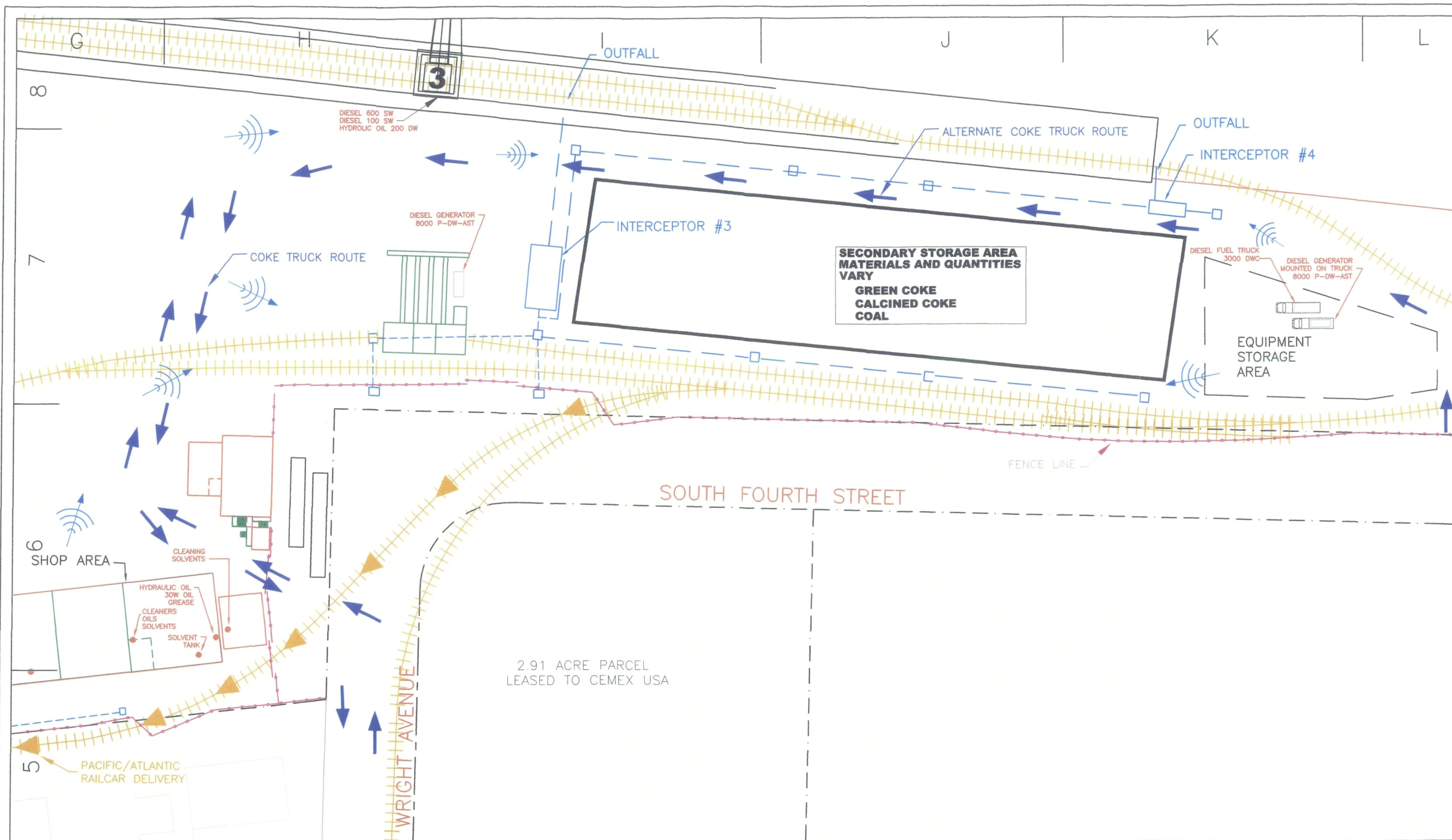


SCALE 1" = 60'

LEVIN-RICHMOND TERMINAL  
STORM WATER FLOW, CATCH BASINS AND INTERCEPTORS  
NORTH MAIN YARD STORMWATER SYSTEMS

2 OF 5

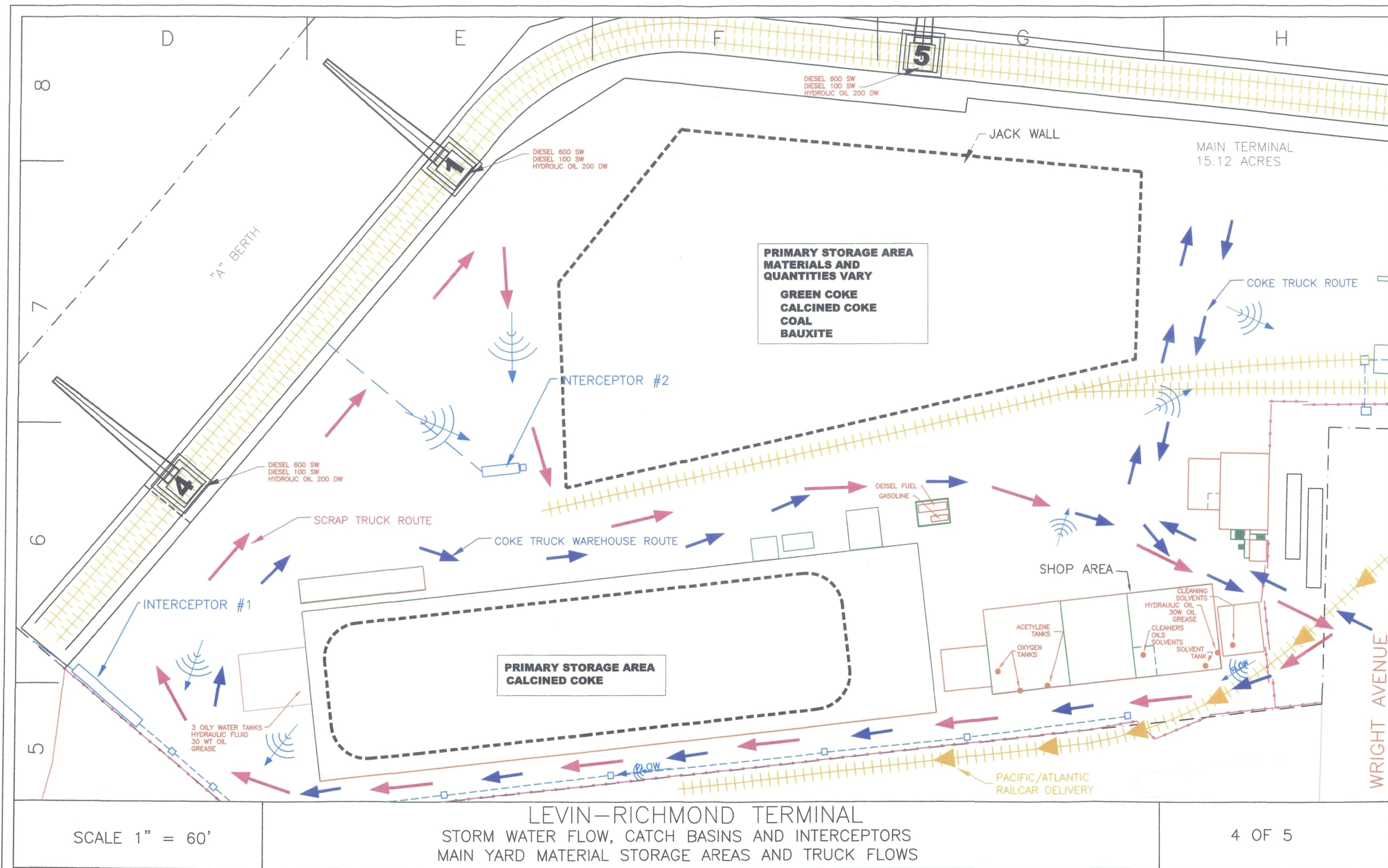




SCALE 1" = 60'

LEVIN-RICHMOND TERMINAL  
STORM WATER FLOW, CATCH BASINS AND INTERCEPTORS  
CENTRAL YARD - ALTERNATE MATERIAL STORAGE AREA AND TRUCK FLOWS



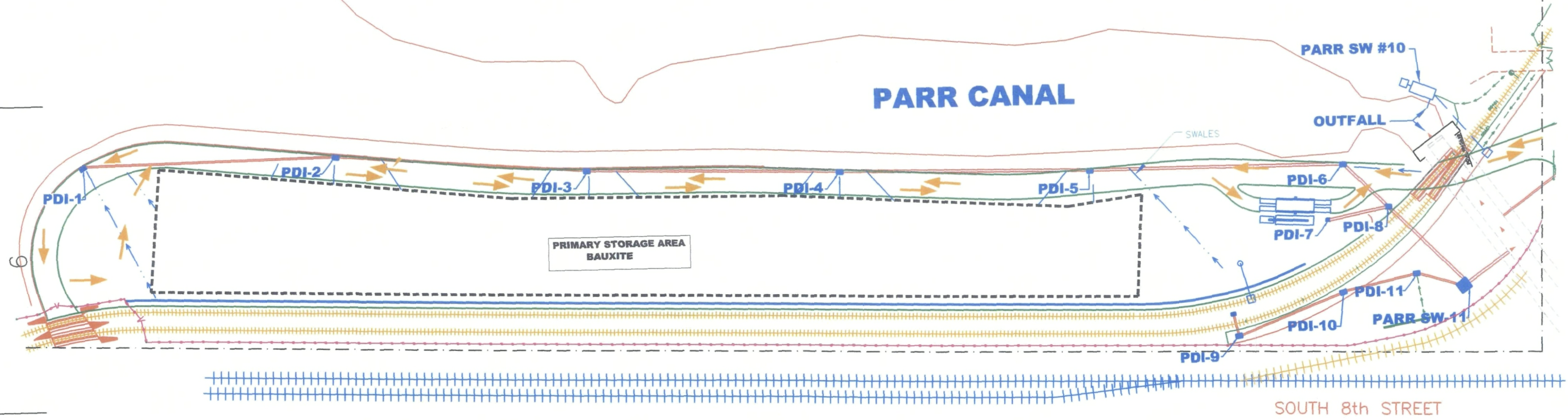


LEVIN-RICHMOND TERMINAL  
STORM WATER FLOW, CATCH BASINS AND INTERCEPTORS  
MAIN YARD MATERIAL STORAGE AREAS AND TRUCK FLOWS



EAGLE ROCK AGGREGATES LEASES THIS  
PROPERTY FROM LEVIN-RICHMOND TERMINAL  
AND HAS FULL RESPONSIBILITY FOR STORM  
WATER ON THIS SIDE OF PARR CANAL

**PARR CANAL**



SCALE 1" = 80'

LEVIN-RICHMOND TERMINAL  
STORM WATER FLOW, CATCH BASINS AND INTERCEPTORS  
SOUTH PARR MATERIAL STORAGE AREA AND TRUCK FLOWS

5 OF 5



**ATTACHMENT B**

**BUSTER BUILDING, GENERAL CONTRACTOR  
LICENSE No. 513203  
INSPECTION OF CONCRETE CAP  
MAY 11, 2008**

## ***BUSTER BUILDING, License No. 513203 C8***

298 Cragmont, San Jose, California 95127 Phone: (408) 251-5446 Fax: (408) 251-3158 busterbn@pacbell.com

May 11, 2008

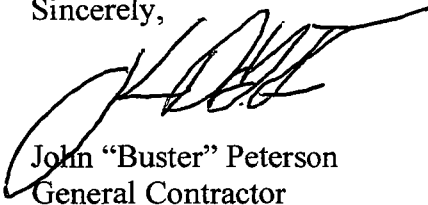
Environmental Technical Services  
1548 Jacob Avenue  
San Jose, California 95118  
Attn: Helen Mawhinney  
Senior Environmental Specialist

RE: Upland Cap Inspection, Former United Heckathorn Facility  
402 Wright Avenue, Richmond, California

The Upland Cap located at the Former United Heckathorn Facility, was inspected by John Peterson for Buster Building, General Contractor, License No. 513203 C8 (concrete) on May 11, 2008 and found to be intact and in good condition.

The cap's was found to be uncompromised and in good condition, with only occasional surface hairline cracks typical of those that develop subsequent to the curing of freshly poured concrete. The cracks are insignificant and not indicative of stress fractures. These surface cracks are too small to repair.

Sincerely,



John "Buster" Peterson  
General Contractor



## **ATTACHMENT C**

### Tables of Analytical Results

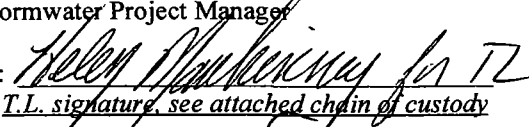
November 15, 2007

January 10, 2008

March 27, 2008

April 28, 2008

**TABLE Ia**  
**Composite Water Sample**  
**Stormwater Interceptors SW-3 through SW-7**  
**November 15, 2007**

Date of Sample: <u>November 15, 2007</u>		Person Collecting Sample: <u>Tony Lester</u> Title: Stormwater Project Manager		
Analytical Laboratory: <u>Entech Analytical Labs, Inc.</u>		Signature:  <i>T.L. signature, see attached chain of custody</i>		
Constituent	SW-3 through SW7	Detection Limit	Unit	EPA Method
Specific Conductance	2,300.0	1.0	μmhos/cm	E120.1
TSS	ND	5.0	ppm	E160.2
Benzene	ND	0.5	ppb	5030/8021
Toluene	ND	0.5	ppb	5030/8021
Ethylbenzene	ND	0.5	ppb	5030/8021
Xylenes	ND	1.0	ppb	5030/8021
Oil and Grease	ND	5.0	ppm	1664
Copper	0.0086	0.005	ppm	E200.7
Lead	ND	0.005	ppm	E200.7
Nickel	ND	0.005	ppm	E200.7
Zinc	0.039	0.010	ppm	E200.7
Organopesticides	ND	Varies	ppb	3510/8081
pH	7.5	6.0-9.0	STU	Hydac
Biological Oxygen Demand	ND	5.0	ppm	SM5210B
ND=Not detected at the lower detection limit      PCB analyses were requested after this sampling event				

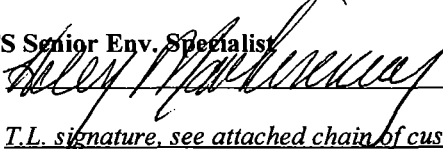
**Table 1b**  
**Stormwater Interceptor SW-3 through SW-7, Composite Sample**  
**Sampled January 10, 2008**

Date of Sample: <u>January 10, 2008</u>		Person Collecting Sample: <u>Tony Lester</u>		
Analytical Laboratory: <u>Entech Analytical Labs, Inc.</u>		Title: Stormwater Project Manager Signature: <i>Tony Lester</i> <i>T.L. signature, see attached chain of custody</i>		
	SW-3 through SW7	Detection Limit	Unit	EPA Method
Specific Conductance	380.0	1.0	umhos/cm	E120.1
TSS	6.0	5.0	ppm	E160.2
Benzene	ND	0.5	ppb	5030/8021
Toluene	ND	0.5	ppb	5030/8021
Ethylbenzene	ND	0.5	ppb	5030/8021
Xylenes	ND	1.0	ppb	5030/8021
Oil and Grease	ND	5.0	ppm	418.1
Copper	0.0086	0.005	ppm	E200.7
Lead	ND	0.005	ppm	E200.7
Nickel	ND	0.005	ppm	E200.7
Zinc	0.039	0.010	ppm	E200.7
Organopesticides	ND	varies	ppb	3510/8081
PCBs	ND	0.098	ppb	3510/8082
pH	7.7	1.0	SGU	Hydac
Biological Oxygen Demand	5.1	5.0	ppm	SM5210B
TSS = Total Suspended Solids ND = Not Detected for this constituent				

**Table 1c**  
**Stormwater Interceptor SW-3 through SW-7, Composite Sample**  
**Sampled March 27, 2008**

Date of Sample: <u>March 27, 2008</u>		Person Collecting Sample: <u>Helen Mawhinney</u>		
Analytical Laboratory: <u>Accutest Laboratories.</u>		Title: Stormwater Project Manager Signature: <i>Helen Mawhinney for TL</i> <i>T.L. signature, see attached chain of custody</i>		
	SW-3 through SW7	Detection Limit	Unit	EPA Method
Specific Conductance	540.0	1.0	umhos/cm	E120.1
TSS	7.0	5.0	ppm	E160.2
Benzene	ND	0.5	ppb	5030/8021
Toluene	9.2	0.5	ppb	5030/8021
Ethylbenzene	ND	0.5	ppb	5030/8021
Xylenes	ND	1.0	ppb	5030/8021
Oil and Grease	ND	5.0	ppm	1664
Copper	0.006	0.005	ppm	E200.7
Lead	ND	0.005	ppm	E200.7
Nickel	ND	0.005	ppm	E200.7
Zinc	0.031	0.010	ppm	E200.7
Organopesticides	ND	varies	ppb	3510/8081
PCBs	ND	0.094	ppb	3510/8082
Ph	7.6	1.0	SGU	Hydac
Biological Oxygen Demand	300.0	5.0	ppm	SM5210B
TSS = Total Suspended Solids ND = Not Detected for this constituent				

**Table Id**  
**Stormwater Interceptor SW-3 through SW-7, Composite Sample**  
**Sampled April 28, 2008**

<b>Date of Sample:</b> <u>April 28, 2008</u>		<b>Person Collecting Sample:</b> <u>Helen Mawhinney</u>		
<b>Analytical Laboratory:</b> <u>Entech Analytical Labs, Inc.</u>		<b>Title:</b> ETS Senior Env. Specialist <b>Signature:</b>  <i>T.L. signature, see attached chain of custody</i>		

	SW-3 through SW7	Detection Limit	Unit	EPA Method
Oil and Grease	ND	5.0	ppm	418.1
Copper	0.0086	0.005	ppm	E200.7
Lead	ND	0.005	ppm	E200.7
Nickel	ND	0.005	ppm	E200.7
Zinc	0.039	0.010	ppm	E200.7
Organopesticides	ND	varies	ppb	3510/8081
PCBs	ND	0.094	ppb	3510/8082
pH	7.7	1.0	SGU	Hydac
Biological Oxygen Demand	ND	5.0	ppm	SM5210B

TSS = Total Suspended Solids  
ND = Not Detected for this constituent

## **ATTACHMENT D**

Laboratory Analytical Reports

Stormwater Samples Collected  
Prior To Interceptor Cleanout  
&  
Discharge Into City Sanitary Sewer

November 15, 2007

January 10, 2008

March 27, 2008

April 28, 2008





## **LABORATORY ANALYTICAL REPORTS**

November 15, 2007

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Helen Mawhinney

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Lab Certificate Number: 58168

Issued: 12/05/2007

P.O. Number: TL17145

Project Name: LRT-Discharge 3-7

Project Location: Richmond Terminal

## Certificate of Analysis-Additional Work

Note: This is an addition to the original 11/28/07 issue to include EPA 8081A Pesticides analysis and to revise Sample ID per client request.

On November 16, 2007, samples were received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

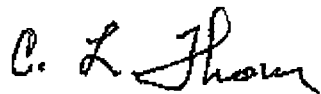
<u>Matrix</u>	<u>Test / Comments</u>
Liquid	Composite Conductivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water n-Hexane extractable material (HEM): EPA 1664 Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater Subcontract - BOD-Alpha Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D VOCs: EPA 5030B / EPA 8021B

The data , QC data, and turn around time for subcontracted analyses is completely under control of the subcontract laboratory.

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).

If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



C. L. Thom  
Laboratory Director

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Attn: Helen Mawhinney

Project Name: LRT-Discharge 3-7

Project Location: Richmond Terminal

P.O. Number: TL17145

Samples Received: 11/16/2007

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab # : 58168-001 Sample ID: LRT SW3-7 Comp in field Matrix: Liquid Sample Date: 11/15/2007 10:00 AM

Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Total Suspended Solids	ND		1.0	5.0	mg/L	N/A	N/A	11/20/2007	WTSS071120

Analyzed by: Eblanco

Reviewed by: HDINH

VOCs: EPA 5030B / EPA 8021B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	11/17/2007	WGC071116
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	11/17/2007	WGC071116
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	11/17/2007	WGC071116
Xylenes, Total	ND		1.0	1.0	µg/L	N/A	N/A	11/17/2007	WGC071116

Surrogate Surrogate Recovery Control Limits (%)

4-Bromofluorobenzene 98.7 65 - 135

Analyzed by: Javidog

Reviewed by: MaiChiTu

Lab # : 58168-007 Sample ID: LRT SW3-7 comp in Lab Matrix: Liquid Sample Date: 11/15/2007 10:00 AM

VOCs: EPA 5030B / EPA 8021B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	11/17/2007	WGC071116
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	11/17/2007	WGC071116
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	11/17/2007	WGC071116
Xylenes, Total	ND		1.0	1.0	µg/L	N/A	N/A	11/17/2007	WGC071116

Surrogate Surrogate Recovery Control Limits (%)

4-Bromofluorobenzene 96.4 65 - 135

Analyzed by: Javidog

Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

12/5/2007 9:38:25 AM - mfeix

# Entech Analytical Labs, Inc.

334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Attn: Helen Mawhinney

Project Name: LRT-Discharge 3-7

Project Location: Richmond Terminal

P.O. Number: TL17145

Samples Received: 11/16/2007

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: 58168-001 Sample ID: LRT SW3-7 Comp in field

Matrix: Liquid Sample Date: 11/15/2007 10:00 AM

Conductivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Conductance	2300		1.0	1.0	µmhos/cm	N/A	N/A	11/16/2007	WCOND071116

Analyzed by: Rlazar0

Reviewed by: HDINH

n-Hexane extractable material (HEM): EPA 1664

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Oil and Grease (HEM)	ND		1.0	5.0	mg/L	N/A	N/A	11/21/2007	WOGHEM071121

Analyzed by: Mfelix

Reviewed by: rlazar0

Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Gamma-BHC (Lindane)	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Beta-BHC	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Heptachlor	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Delta-BHC	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Aldrin	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Heptachlor Epoxide	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Endosulfan I	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
4,4'-DDE	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Dieldrin	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Endrin	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
4,4'-DDD	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Endosulfan II	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
4,4'-DDT	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Endrin Aldehyde	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Endosulfan Sulfate	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Methoxychlor	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Endrin Ketone	ND		1.0	0.040	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Chlordane (technical)	ND		1.0	0.20	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204
Toxaphene	ND		1.0	0.20	µg/L	12/4/2007	PEW071204	12/4/2007	PEW071204

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	88.6	43 - 121

Analyzed by: NBocalan

Reviewed by: mtran

Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Copper	0.0086		1.0	0.0050	mg/L	11/19/2007	WM071119	11/20/2007	WM071119
Lead	ND		1.0	0.0050	mg/L	11/19/2007	WM071119	11/20/2007	WM071119
Nickel	ND		1.0	0.0050	mg/L	11/19/2007	WM071119	11/20/2007	WM071119
Zinc	0.039		1.0	0.010	mg/L	11/19/2007	WM071119	11/20/2007	WM071119

Analyzed by: CTran

Reviewed by: HDINH

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

12/5/2007 9:38:25 AM - mfelix

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC/Prep Batch ID: PEW071204

Validated by: mtran - 12/04/07

QC/Prep Date: 12/4/2007

Parameter	Result	DF	PQLR	Units
4,4'-DDD	ND	1	0.040	µg/L
4,4'-DDE	ND	1	0.040	µg/L
4,4'-DDT	ND	1	0.040	µg/L
Aldrin	ND	1	0.040	µg/L
Alpha-BHC	ND	1	0.040	µg/L
Beta-BHC	ND	1	0.040	µg/L
Chlordane (technical)	ND	1	0.20	µg/L
delta-BHC	ND	1	0.040	µg/L
Dieldrin	ND	1	0.040	µg/L
Endosulfan I	ND	1	0.040	µg/L
Endosulfan II	ND	1	0.040	µg/L
Endosulfan Sulfate	ND	1	0.040	µg/L
Endrin	ND	1	0.040	µg/L
Endrin Aldehyde	ND	1	0.040	µg/L
Endrin Ketone	ND	1	0.040	µg/L
Gamma-BHC (Lindane)	ND	1	0.040	µg/L
Heptachlor	ND	1	0.040	µg/L
Heptachlor Epoxide	ND	1	0.040	µg/L
Methoxychlor	ND	1	0.040	µg/L
Toxaphene	ND	1	0.20	µg/L
Surrogate for Blank	% Recovery	Control Limits		
Decachlorobiphenyl	97.2	43 - 121		

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Method Blank - Liquid - VOCs: EPA 5030B / EPA 8021B

QC Batch ID: WGC071116

Validated by: MaiChiTu - 11/26/07

QC Batch Analysis Date: 11/16/2007

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	1.0	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	108	65 - 135

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC Batch ID: PEW071204

Reviewed by: mtran - 12/04/07

QC/Prep Date: 12/4/2007

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0770	µg/L	77.0	35 - 130
Aldrin	<0.040	0.10	0.0918	µg/L	91.8	35 - 130
Dieldrin	<0.040	0.10	0.0940	µg/L	94.0	35 - 130
Endrin	<0.040	0.10	0.0912	µg/L	91.2	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.0940	µg/L	94.0	35 - 130
Heptachlor	<0.040	0.10	0.0903	µg/L	90.3	35 - 130
Surrogate	% Recovery	Control Limits				
Decachlorobiphenyl	98.6	43 - 121				

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0750	µg/L	75.0	2.7	35.0	35 - 130
Aldrin	<0.040	0.10	0.0917	µg/L	91.7	0.11	35.0	35 - 130
Dieldrin	<0.040	0.10	0.0950	µg/L	95.0	1.1	35.0	35 - 130
Endrin	<0.040	0.10	0.0917	µg/L	91.7	0.55	35.0	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.0930	µg/L	93.0	1.1	35.0	35 - 130
Heptachlor	<0.040	0.10	0.0887	µg/L	88.7	1.8	35.0	35 - 130
Surrogate	% Recovery	Control Limits						
Decachlorobiphenyl	93.2	43 - 121						

**3334 Victor Court , Santa Clara, CA 95054    Phone: (408) 588-0200    Fax: (408) 588-0201**

**QC Batch ID: WGC071116**

Reviewed by: MaiChiTu - 11/26/07

QC Batch ID Analysis Date: 11/16/2007

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	4.0	4.12	µg/L	103	65 - 135
Ethyl Benzene	<0.50	4.0	4.12	µg/L	103	65 - 135
Methyl-t-butyl Ether	<2.0	4.0	3.66	µg/L	91.5	65 - 135
Toluene	<0.50	4.0	4.06	µg/L	102	65 - 135
Xylenes, total	<1.0	12	12.6	µg/L	105	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	98.9	65 - 135

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	4.0	4.10	µg/L	102	0.49	25.0	65 - 135
Ethyl Benzene	<0.50	4.0	4.22	µg/L	106	2.4	25.0	65 - 135
Methyl-t-butyl Ether	<2.0	4.0	3.70	µg/L	92.5	1.1	25.0	65 - 135
Toluene	<0.50	4.0	4.12	µg/L	103	1.5	25.0	65 - 135
Xylenes, total	<1.0	12	12.9	µg/L	108	2.4	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102.0	65 - 135



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater

QC Batch ID: WM071119

QC/Prep Date: 11/19/2007

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Aluminum	<0.050	0.50	0	mg/L	101	85 - 115
Antimony	<0.010	0.50	0.517	mg/L	103	85 - 115
Arsenic	<0.010	0.50	0.495	mg/L	98.9	85 - 115
Barium	<0.0050	0.50	0.503	mg/L	101	85 - 115
Beryllium	<0.0050	0.50	0.482	mg/L	96.5	85 - 115
Cadmium	<0.0020	0.50	0.496	mg/L	99.3	85 - 115
Chromium	<0.0050	0.50	0.508	mg/L	102	85 - 115
Cobalt	<0.0050	0.50	0.508	mg/L	102	85 - 115
Copper	<0.0050	0.50	0.501	mg/L	100	85 - 115
Lead	<0.0050	0.50	0.502	mg/L	100	85 - 115
Manganese	<0.0050	0.50	0.507	mg/L	101	85 - 115
Molybdenum	<0.0050	0.50	0.508	mg/L	102	85 - 115
Nickel	<0.0050	0.50	0.507	mg/L	101	85 - 115
Selenium	<0.020	0.50	0.467	mg/L	93.5	85 - 115
Silver	<0.0050	0.50	0.501	mg/L	100	85 - 115
Thallium	<0.020	0.50	0.476	mg/L	95.2	85 - 115
Tin	<0.050	1.0	0.990	mg/L	99.0	85 - 115
Titanium	<0.0020	0.50	0.504	mg/L	101	85 - 115
Vanadium	<0.0050	0.50	0.512	mg/L	102	85 - 115
Zinc	<0.010	0.50	0.493	mg/L	98.6	85 - 115

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Antimony	<0.010	0.50	0.521	mg/L	104	0.67	25.0	85 - 115
Arsenic	<0.010	0.50	0.493	mg/L	98.6	0.30	25.0	85 - 115
Barium	<0.0050	0.50	0.516	mg/L	103	2.5	25.0	85 - 115
Beryllium	<0.0050	0.50	0.493	mg/L	98.6	2.2	25.0	85 - 115
Cadmium	<0.0020	0.50	0.494	mg/L	98.8	0.46	25.0	85 - 115
Chromium	<0.0050	0.50	0.509	mg/L	102	0.12	25.0	85 - 115
Cobalt	<0.0050	0.50	0.510	mg/L	102	0.33	25.0	85 - 115
Copper	<0.0050	0.50	0.502	mg/L	100	0.060	25.0	85 - 115
Lead	<0.0050	0.50	0.506	mg/L	101	0.85	25.0	85 - 115
Manganese	<0.0050	0.50	0.518	mg/L	104	2.2	25.0	85 - 115
Molybdenum	<0.0050	0.50	0.511	mg/L	102	0.67	25.0	85 - 115
Nickel	<0.0050	0.50	0.508	mg/L	102	0.20	25.0	85 - 115
Selenium	<0.020	0.50	0.476	mg/L	95.2	1.9	25.0	85 - 115
Silver	<0.0050	0.50	0.502	mg/L	100	0.16	25.0	85 - 115
Thallium	<0.020	0.50	0.480	mg/L	96.0	0.75	25.0	85 - 115
Tin	<0.050	1.0	1.00	mg/L	100	0.92	25.0	85 - 115
Titanium	<0.0020	0.50	0.514	mg/L	103	2.0	25.0	85 - 115
Vanadium	<0.0050	0.50	0.512	mg/L	102	0.020	25.0	85 - 115
Zinc	<0.010	0.50	0.492	mg/L	98.4	0.20	25.0	85 - 115

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - n-Hexane extractable material (HEM): EPA 1664

QC Batch ID: WOGHEM071121

Reviewed by: rlazaro - 11/21/07

QC Batch ID Analysis Date: 11/21/2007

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Oil and Grease (HEM)	<5.0	20	21.0	mg/L	105	78 - 114

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Oil and Grease (HEM)	<5.0	20	20.5	mg/L	102	2.4	18.0	78 - 114



Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

04 December 2007

Entech Analytical Labs, Inc.

Attn: Simon Hague

3334 Victor Court

Santa Clara, CA 95054

RE: LRT-Discharge 3-7

Work Order: 07K0645

Enclosed are the results of analyses for samples received by the laboratory on 11/16/07 18:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Chelsea L. Sandelin For Robbie C. Phillips  
Project Manager



# Alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

## CHEMICAL EXAMINATION REPORT

Page 1 of 4

Entech Analytical Labs, Inc.  
3334 Victor Court  
Santa Clara, CA 95054  
Attn: Simon Hague

Report Date: 12/04/07 08:27  
Project No: 58168  
Project ID: LRT-Discharge 3-7

Order Number  
07K0645

Receipt Date/Time  
11/16/2007 18:05

Client Code  
ENTECH

Client PO/Reference

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
58168-001 SW3-7 Composite	07K0645-01	Water	11/15/07 10:00	11/16/07 18:05

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

12/4/2007



# alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

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## CHEMICAL EXAMINATION REPORT

Page 2 of 4

Entech Analytical Labs, Inc.

3334 Victor Court

Santa Clara, CA 95054

Attn: Simon Hague

Report Date: 12/04/07 08:27

Project No: 58168

Project ID: LRT-Discharge 3-7

Order Number

07K0645

Receipt Date/Time

11/16/2007 18:05

Client Code

ENTECH

Client PO/Reference

### Alpha Analytical Laboratories, Inc.

METHOD

BATCH

PREPARED

ANALYZED

DILUTION

RESULT

PQL

NOTE

58168-001 SW3-7 Composite (07K0645-01)

Sample Type: Water

Sampled: 11/15/07 10:00

Conventional Chemistry Parameters by APHA/EPA Methods

Biochemical Oxygen Demand

SM5210B

AK71617

11/16/07

11/21/07

1

ND mg/l

5.0

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

12/4/2007



# alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

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## CHEMICAL EXAMINATION REPORT

Page 3 of 4

Entech Analytical Labs, Inc.

3334 Victor Court

Santa Clara, CA 95054

Attn: Simon Hague

Report Date: 12/04/07 08:27

Project No: 58168

Project ID: LRT-Discharge 3-7

Order Number

AK0645

Receipt Date/Time

11/16/2007 18:05

Client Code

ENTECH

Client PO/Reference

### Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AK71617 - General Preparation</b>										
<b>Blank (AK71617-BLK1)</b>				Prepared: 11/16/07 Analyzed: 11/21/07						
Biochemical Oxygen Demand	ND	5.0	mg/l							
<b>Blank (AK71617-BLK2)</b>				Prepared: 11/16/07 Analyzed: 11/21/07						
Biochemical Oxygen Demand	ND	5.0	mg/l							
<b>ICS (AK71617-BS1)</b>				Prepared: 11/16/07 Analyzed: 11/21/07						
Biochemical Oxygen Demand	183	5.0	mg/l	200		91.5	80-120			
<b>ICS Dup (AK71617-BSD1)</b>				Prepared: 11/16/07 Analyzed: 11/21/07						
Biochemical Oxygen Demand	177	5.0	mg/l	200		88.5	80-120	3.33	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

12/4/2007



# alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

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## CHEMICAL EXAMINATION REPORT

Page 4 of 4

Entech Analytical Labs, Inc.  
3334 Victor Court  
Santa Clara, CA 95054  
Attn: Simon Hague

Report Date: 12/04/07 08:27  
Project No: 58168  
Project ID: LRT-Discharge 3-7

Order Number

Receipt Date/Time

Client Code

Client PO/Reference

7K0645

11/16/2007 18:05

ENTECH

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
PQL Practical Quantitation Limit



Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

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**CHEMICAL EXAMINATION REPORT**

Page 1 of 1

Entech Analytical Labs, Inc.  
3334 Victor Court  
Santa Clara, CA 95054  
Attn: Simon Hague

Report Date: 12/04/07 08:27  
Project No: 58168  
Project ID: LRT-Discharge 3-7

Order Number  
K0645

Receipt Date/Time  
11/16/2007 18:05

Client Code  
ENTECH

Client PO/Reference

**Items for Project Manager Review**

<u>LabNumber</u>	<u>Analysis</u>	<u>Analyte</u>	<u>Exception</u>
			Default Report (not modified)
			VERSION 5.8.5:2709



# Entech Analytical Labs, Inc.

Entech ID and PO#: 58168

3334 Victor Court, Santa Clara, CA 95054

(408) 588-0200

FAX (408) 588-0201

## Subcontract Chain of Custody

Subcontract Lab: Alpha

Date Sent: 11/16/07

Date Due: 11/28/07

Project Name: LRT-Discharge 3-7

Project Location: Richmond Terminal

*07K0643*  
*07K0645*

11/28/07

Entech LabNumber	Customer Sample Name/Field Point ID	Matrix	Method	Collect Date	Collect Time
58168-001	LRT SW-3 comp	Liquid	BOD-Alpha	11/15/2007	10:00

Comments:

Relinquished By: <i>[Signature]</i>	Received By:	Date: 11-16-07	Time: 12:56
Relinquished By: <i>RR</i>	Received By:	Date: 11-16-07	Time: 1458
Relinquished By: <i>gm</i>	Received By: <i>[Signature]</i>	Date: 11-16-07	Time: 1805

Send the Report to: DATA@ENTECHLABS.COM

SECRET

COPY  
ATTACHED

**Request Discharge**  
City Rich Sanitary Sewer

**Env Tech Serv**

14054070/20

3.



## **LABORATORY ANALYTICAL REPORTS**

January 10, 2008

# Entech Analytical Labs, Inc.

---

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Helen Mawhinney

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Lab Certificate Number: 59085

Issued: 01/16/2008

P.O. Number: TL 17193

Project Name: LRT Discharge

## Certificate of Analysis - Final Report

On January 11, 2008, a sample was received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

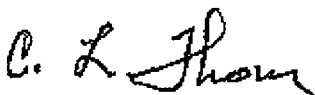
<u>Matrix</u>	<u>Test / Comments</u>
Liquid	Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).

Subcontracted work is the responsibility of the subcontract laboratory, this includes turn-around-time and data quality.

If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



C. L. Thom  
Laboratory Director

# Entech Analytical Labs, Inc.

2334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Attn: Helen Mawhinney

Project Name: LRT Discharge

P.O. Number: TL 17193

Samples Received: 01/11/2008

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: 59085-001

Sample ID: LRT0 SW3-SW-7

Matrix: Liquid Sample Date: 1/10/2008 3:50 PM

Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Gamma-BHC (Lindane)	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Beta-BHC	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Heptachlor	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Delta-BHC	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Aldrin	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Heptachlor Epoxide	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Endosulfan I	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
4,4'-DDE	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Dieldrin	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Endrin	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
4,4'-DDD	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Endosulfan II	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
4'-DDT	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Endrin Aldehyde	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Endosulfan Sulfate	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Methoxychlor	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Endrin Ketone	ND		0.98	0.039	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Chlordane (technical)	ND		0.98	0.20	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115
Toxaphene	ND		0.98	0.20	µg/L	1/15/2008	PEW080115	1/15/2008	PEW080115

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	83.5	43 - 121

Analyzed by: Nbocalan

Reviewed by: mtran

PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Aroclor 1016	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1221	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1232	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1242	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1248	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1254	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1260	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1262	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115
Aroclor 1268	ND		0.98	0.098	µg/L	1/15/2008	PCW080115	1/16/2008	PCW080115

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	65.6	43 - 156

Analyzed by: Nbocalan

Reviewed by: mtran

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

1/16/2008 3:30:33 PM - mfeix

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Method Blank - Liquid - PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

QC/Prep Batch ID: PCW080115

Validated by: mtran - 01/16/08

QC/Prep Date: 1/15/2008

Parameter	Result	DF	PQLR	Units
Aroclor 1016	ND	1	0.10	µg/L
Aroclor 1221	ND	1	0.10	µg/L
Aroclor 1232	ND	1	0.10	µg/L
Aroclor 1242	ND	1	0.10	µg/L
Aroclor 1248	ND	1	0.10	µg/L
Aroclor 1254	ND	1	0.10	µg/L
Aroclor 1260	ND	1	0.10	µg/L
Aroclor 1262	ND	1	0.10	µg/L
Aroclor 1268	ND	1	0.10	µg/L
Surrogate for Blank	% Recovery	Control Limits		
Decachlorobiphenyl	94.2	43 - 156		

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC/Prep Batch ID: PEW080115

Validated by: mtran - 01/16/08

QC/Prep Date: 1/15/2008

Parameter	Result	DF	PQLR	Units
4,4'-DDD	ND	1	0.040	µg/L
4,4'-DDE	ND	1	0.040	µg/L
4,4'-DDT	ND	1	0.040	µg/L
Aldrin	ND	1	0.040	µg/L
Alpha-BHC	ND	1	0.040	µg/L
Beta-BHC	ND	1	0.040	µg/L
Chlordane (technical)	ND	1	0.20	µg/L
delta-BHC	ND	1	0.040	µg/L
Dieldrin	ND	1	0.040	µg/L
Endosulfan I	ND	1	0.040	µg/L
Endosulfan II	ND	1	0.040	µg/L
Endosulfan Sulfate	ND	1	0.040	µg/L
Endrin	ND	1	0.040	µg/L
Endrin Aldehyde	ND	1	0.040	µg/L
Endrin Ketone	ND	1	0.040	µg/L
Gamma-BHC (Lindane)	ND	1	0.040	µg/L
Heptachlor	ND	1	0.040	µg/L
Heptachlor Epoxide	ND	1	0.040	µg/L
Methoxychlor	ND	1	0.040	µg/L
Toxaphene	ND	1	0.20	µg/L
Surrogate for Blank	% Recovery	Control Limits		
Decachlorobiphenyl	99.1	43 - 121		

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

QC Batch ID: PCW080115

Reviewed by: mtran - 01/16/08

QC/Prep Date: 1/15/2008

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Aroclor 1016	<0.10	0.40	0.384	µg/L	96.0	40 - 140
Aroclor 1260	<0.10	0.40	0.413	µg/L	103	40 - 140
Surrogate	% Recovery	Control Limits				
Decachlorobiphenyl	96.4	43 - 156				

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Aroclor 1016	<0.10	0.40	0.376	µg/L	94.0	2.2	30.0	40 - 140
Aroclor 1260	<0.10	0.40	0.411	µg/L	103	0.58	30.0	40 - 140
Surrogate	% Recovery	Control Limits						
Decachlorobiphenyl	94.0	43 - 156						



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC Batch ID: PEW080115

Reviewed by: mtran - 01/16/08

QC/Prep Date: 1/15/2008

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0825	µg/L	82.5	35 - 130
Aldrin	<0.040	0.10	0.0816	µg/L	81.6	35 - 130
Dieldrin	<0.040	0.10	0.0822	µg/L	82.2	35 - 130
Endrin	<0.040	0.10	0.0874	µg/L	87.4	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.0816	µg/L	81.6	35 - 130
Heptachlor	<0.040	0.10	0.0809	µg/L	80.9	35 - 130

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	90.1	43 - 121

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0822	µg/L	82.2	0.37	35.0	35 - 130
Aldrin	<0.040	0.10	0.0815	µg/L	81.5	0.12	35.0	35 - 130
Dieldrin	<0.040	0.10	0.0817	µg/L	81.7	0.61	35.0	35 - 130
Endrin	<0.040	0.10	0.0870	µg/L	87.0	0.46	35.0	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.0823	µg/L	82.3	0.85	35.0	35 - 130
Heptachlor	<0.040	0.10	0.0807	µg/L	80.7	0.25	35.0	35 - 130

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	88.1	43 - 121

**LEVIN RICHMOND TERMINAL  
402 WRIGHT AVENUE  
RICHMOND, CA**

INTECH  
COPY

<b>ENTECH ANALYTICAL LABS, INC.</b>		<b>CHAIN OF CUSTODY/ANALYSES REQUESTED</b>	<b>59085</b>
3334 VICTOR COURT	Phone: (408) 588-0200		
SANTA CLARA, CA 95054	Fax: (408) 588-0201	ELAP No. 2346	EPA DISCHARGE SAMPLE
Attention to: Helen Mawhinney Company Name: Environmental Technical Services 1548 Jacob Avenue		PO No. <b>TL 17193</b> Project No./Name <b>LRT DISCHARGE</b> <b>SW#3 → SW#7</b> <b>8081 + 8082</b>	TURNAROUND TIME: <b>"5 DAYS"</b>
San Jose, California 95118 ENTECH ORDER NO: _____		SAMPLER: _____	

**CITY OF RICHMOND STORMWATER SEWER DISCHARGE SAMPLES FOR EPA**

CLIENT ID	DATE	TIME	ENTECH No.	PESTICIDES	Polychlorinated Biphenyls
EPA Method				8081	8082
LRTD SW3-SW-7	10-10-08	1550	(S) - 001	X	X
<i>Two amber liters</i>				<i>5 Lit Ambers N/P</i>	
				<i>res'd @ Temperature = 4.2°C.</i>	<i>***</i>

**LRT0 SW-3 – SW-7 was composited in the field as one sample for analyses**

Relinquished By: T. LESTER T. LESTER 1-10-08  
print signature date/time

Relinquished By: R. JAWIS 1/10/08 0945  
print signature date/time

Received By: Elvin Kumar 1/11/08 0837  
 print signature date/time  
Elvin Kumar 1/11/08 0948

Received By: \_\_\_\_\_

print \_\_\_\_\_ signature \_\_\_\_\_ date/time \_\_\_\_\_

ENV 1001 SERV

14082643 / 23

P. 2.

# ***Entech Analytical Labs, Inc.***

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**3334 Victor Court , Santa Clara, CA 95054**

**Phone: (408) 588-0200**

**Fax: (408) 588-0201**

**Helen Mawhinney**

**Environmental Technical Services (ETS)**

**1548 Jacob Ave**

**San Jose, CA 95118**

**Lab Certificate Number: 59082**

**Issued: 01/18/2008**

**P.O. Number: TL 17194**

**Project Name: LRT Discharge**

## **Certificate of Analysis - Final Report**

On January 11, 2008, samples were received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:


<u>Matrix</u>	<u>Test / Comments</u>
Liquid	Composite Conductivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water n-Hexane extractable material (HEM): EPA 1664 Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater Subcontract - BOD - Alpha Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D VOCs: EPA 5030B / EPA 8021B

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).

Subcontracted work is the responsibility of the subcontract laboratory, this includes turn-around-time and data quality.

If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



C. L. Thom

Laboratory Director

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Attn: Helen Mawhinney

Project Name: LRT Discharge

P.O. Number: TL 17194

Samples Received: 01/11/2008

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab # : 59082-001 Sample ID: LRTO SW3-SW-7 Matrix: Liquid Sample Date: 1/10/2008 3:30 PM

Conductivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Conductance	380		1.0	1.0	µmhos/cm	N/A	N/A	1/11/2008	WCOND080111

Analyzed by: Hdinh

Reviewed by: RLAZARO

n-Hexane extractable material (HEM): EPA 1664

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Oil and Grease (HEM)	ND		1.0	5.0	mg/L	N/A	N/A	1/17/2008	WOGHEM080117

Analyzed by: Rlazaro

Reviewed by: mfelix

Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Copper	0.0070		1.0	0.0050	mg/L	1/14/2008	WM080114	1/15/2008	WM080114
Lead	ND		1.0	0.0050	mg/L	1/14/2008	WM080114	1/15/2008	WM080114
Nickel	ND		1.0	0.0050	mg/L	1/14/2008	WM080114	1/15/2008	WM080114
Zinc	0.047		1.0	0.010	mg/L	1/14/2008	WM080114	1/15/2008	WM080114

Analyzed by: CTran

Reviewed by: HDINH

Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Total Suspended Solids	6.0		1.0	5.0	mg/L	N/A	N/A	1/14/2008	WTSS080114

Analyzed by: Eblanco

Reviewed by: HDINH

Lab # : 59082-007 Sample ID: LRTO SW3-SW-7 (Composite) Matrix: Liquid Sample Date: 1/10/2008 3:30 PM

VOCs: EPA 5030B / EPA 8021B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	1/14/2008	WGC080114
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	1/14/2008	WGC080114
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	1/14/2008	WGC080114
Xylenes, Total	ND		1.0	1.0	µg/L	N/A	N/A	1/14/2008	WGC080114

Surrogate  
4-Bromofluorobenzene

Surrogate Recovery  
88.5

Control Limits (%)  
65 - 135

Analyzed by: JABidog

Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

1/18/2008 12:42:30 PM - mfelix

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Replicate - Liquid - Conductivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water

QC Batch ID: WCOND080111

Validated by: RLAZARO - 01/14/08

QC Batch Analysis Date: 1/11/2008

Parameter		Sample Result	Replicate Result	Units	RPD	QC Type	RPD Limits
Conductance	59088-001	108.9	108.7	$\mu$ mhos/cm	0.2	Replicate	25.0

Replicate - Liquid - Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D

QC Batch ID: WTSS080114

Validated by: HDINH - 01/15/08

QC Batch Analysis Date: 1/14/2008

Parameter		Sample Result	Replicate Result	Units	RPD	QC Type	RPD Limits
Total Suspended Solids	59052-002	ND	ND	mg/L	0.0	Replicate	25.0

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - VOCs: EPA 5030B / EPA 8021B

QC Batch ID: WGC080114

Validated by: MaiChiTu - 01/16/08

QC Batch Analysis Date: 1/14/2008

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	1.0	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	91.8	65 - 135

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 5030B / EPA 8021B

QC Batch ID: WGC080114

Reviewed by: MaiChiTu - 01/16/08

QC Batch ID Analysis Date: 1/14/2008

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	4.0	3.49	µg/L	87.2	65 - 135
Ethyl Benzene	<0.50	4.0	3.63	µg/L	90.8	65 - 135
Methyl-t-butyl Ether	<2.0	4.0	3.47	µg/L	86.8	65 - 135
Toluene	<0.50	4.0	3.45	µg/L	86.2	65 - 135
Xylenes, total	<1.0	12	11.0	µg/L	91.7	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	93.0	65 - 135

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	4.0	3.68	µg/L	92.0	5.3	25.0	65 - 135
Ethyl Benzene	<0.50	4.0	3.84	µg/L	96.0	5.6	25.0	65 - 135
Methyl-t-butyl Ether	<2.0	4.0	3.60	µg/L	90.0	3.7	25.0	65 - 135
Toluene	<0.50	4.0	3.65	µg/L	91.2	5.6	25.0	65 - 135
Xylenes, total	<1.0	12	11.6	µg/L	96.7	5.3	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	95.3	65 - 135

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater

QC Batch ID: WM080114

Reviewed by: HDINH - 01/15/08

QC/Prep Date: 1/14/2008

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Antimony	<0.010	0.50	0.503	mg/L	101	85 - 115
Arsenic	<0.010	0.50	0.486	mg/L	97.3	85 - 115
Barium	<0.0050	0.50	0.508	mg/L	102	85 - 115
Beryllium	<0.0050	0.50	0.488	mg/L	97.5	85 - 115
Cadmium	<0.0020	0.50	0.504	mg/L	101	85 - 115
Chromium	<0.0050	0.50	0.519	mg/L	104	85 - 115
Cobalt	<0.0050	0.50	0.523	mg/L	105	85 - 115
Copper	<0.0050	0.50	0.521	mg/L	104	85 - 115
Lead	<0.0050	0.50	0.508	mg/L	102	85 - 115
Molybdenum	<0.0050	0.50	0.505	mg/L	101	85 - 115
Nickel	<0.0050	0.50	0.519	mg/L	104	85 - 115
Selenium	<0.020	0.50	0.467	mg/L	93.4	85 - 115
Silver	<0.0050	0.50	0.514	mg/L	103	85 - 115
Thallium	<0.020	0.50	0.479	mg/L	95.9	85 - 115
Vanadium	<0.0050	0.50	0.523	mg/L	105	85 - 115
Zinc	<0.010	0.50	0.508	mg/L	102	85 - 115

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Antimony	<0.010	0.50	0.500	mg/L	100	0.46	25.0	85 - 115
Arsenic	<0.010	0.50	0.488	mg/L	97.5	0.27	25.0	85 - 115
Barium	<0.0050	0.50	0.511	mg/L	102	0.61	25.0	85 - 115
Beryllium	<0.0050	0.50	0.490	mg/L	98.0	0.47	25.0	85 - 115
Cadmium	<0.0020	0.50	0.496	mg/L	99.2	1.6	25.0	85 - 115
Chromium	<0.0050	0.50	0.510	mg/L	102	1.8	25.0	85 - 115
Cobalt	<0.0050	0.50	0.513	mg/L	103	1.9	25.0	85 - 115
Copper	<0.0050	0.50	0.512	mg/L	102	1.8	25.0	85 - 115
Lead	<0.0050	0.50	0.508	mg/L	102	0.0	25.0	85 - 115
Molybdenum	<0.0050	0.50	0.505	mg/L	101	0.020	25.0	85 - 115
Nickel	<0.0050	0.50	0.511	mg/L	102	1.6	25.0	85 - 115
Selenium	<0.020	0.50	0.460	mg/L	91.9	1.6	25.0	85 - 115
Silver	<0.0050	0.50	0.507	mg/L	101	1.5	25.0	85 - 115
Thallium	<0.020	0.50	0.483	mg/L	96.7	0.83	25.0	85 - 115
Vanadium	<0.0050	0.50	0.515	mg/L	103	1.6	25.0	85 - 115
Zinc	<0.010	0.50	0.497	mg/L	99.5	2.2	25.0	85 - 115



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - n-Hexane extractable material (HEM): EPA 1664

QC Batch ID: WOGHEM080117

Reviewed by: mfelix - 01/18/08

QC Batch ID Analysis Date: 1/17/2008

LCS						
Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Oil and Grease (HEM)	<5.0	20	18.1	mg/L	90.5	78 - 114

LCSD								
Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Oil and Grease (HEM)	<5.0	20	18.0	mg/L	90.0	0.55	18.0	78 - 114



*alpha*

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

21 January 2008

Entech Analytical Labs, Inc.

Attn: Simon Hague

3334 Victor Court

Santa Clara, CA 95054

RE: LRT-Discharge

Work Order: 08A0544

Enclosed are the results of analyses for samples received by the laboratory on 01/11/08 15:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Chelsea L. Sandelin*

Chelsea L. Sandelin For Robbie C. Phillips  
Project Manager



Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

**CHEMICAL EXAMINATION REPORT**

Page 1 of 4

Entech Analytical Labs, Inc.  
3334 Victor Court  
Santa Clara, CA 95054  
Attn: Simon Hague

Report Date: 01/21/08 10:08  
Project No: 59082  
Project ID: LRT-Discharge

Order Number  
08A0544

Receipt Date/Time  
01/11/2008 15:25

Client Code  
ENTECH

Client PO/Reference

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
59082-001 LRTO SW-3-SW-7	08A0544-01	Water	01/10/08 00:00	01/11/08 15:25

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

1/21/2008



# alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

## CHEMICAL EXAMINATION REPORT

Page 2 of 4

Entech Analytical Labs, Inc.

3334 Victor Court

Santa Clara, CA 95054

Attn: Simon Hague

Report Date: 01/21/08 10:08

Project No: 59082

Project ID: LRT-Discharge

Order Number  
A0544

Receipt Date/Time  
01/11/2008 15:25

Client Code  
ENTECH

Client PO/Reference

### Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
59082-001 LRTO SW-3-SW-7 (08A0544-01)	Sample Type: Water				Sampled: 01/10/08 00:00			
Conventional Chemistry Parameters by APHA/EPA Methods								
Biochemical Oxygen Demand	SM5210B	AA81520	01/11/08	01/16/08	1	5.1 mg/l	5.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

1/21/2008



# alpha

Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

## CHEMICAL EXAMINATION REPORT

Page 3 of 4

Entech Analytical Labs, Inc.

3334 Victor Court

Santa Clara, CA 95054

Attn: Simon Hague

Report Date: 01/21/08 10:08

Project No: 59082

Project ID: LRT-Discharge

Order Number

BA0544

Receipt Date/Time

01/11/2008 15:25

Client Code

ENTECH

Client PO/Reference

### Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AA81520 - General Preparation</b>										
<b>Blank (AA81520-BLK1)</b>				Prepared: 01/11/08 Analyzed: 01/16/08						
Biochemical Oxygen Demand	ND	5.0	mg/l							
<b>Blank (AA81520-BLK2)</b>				Prepared: 01/11/08 Analyzed: 01/16/08						
Biochemical Oxygen Demand	ND	5.0	mg/l							
<b>ICS (AA81520-BS1)</b>				Prepared: 01/11/08 Analyzed: 01/16/08						
Biochemical Oxygen Demand	197	5.0	mg/l	200		98.5	80-120			
<b>ICS Dup (AA81520-BSD1)</b>				Prepared: 01/11/08 Analyzed: 01/16/08						
Biochemical Oxygen Demand	205	5.0	mg/l	200		102	80-120	3.98	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

1/21/2008



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## CHEMICAL EXAMINATION REPORT

Page 4 of 4

Entech Analytical Labs, Inc.  
3334 Victor Court  
Santa Clara, CA 95054  
Attn: Simon Hague

Report Date: 01/21/08 10:08  
Project No: 59082  
Project ID: LRT-Discharge

Order Number  
08A0544

Receipt Date/Time  
01/11/2008 15:25

Client Code  
ENTECH

Client PO/Reference

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
PQL Practical Quantitation Limit

# Entech Analytical Labs, Inc.

Entech ID and PO#: 59082

3334 Victor Court, Santa Clara, CA 95054

(408) 588-0200

FAX (408) 588-0201

## Subcontract Chain of Custody

Subcontract Lab: Alpha

Date Sent: 01/11/08

Date Due: 01/18/08


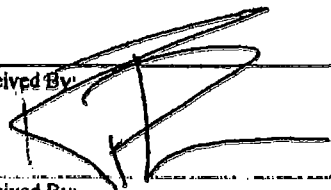



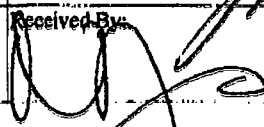
01/18/08

Project Name: LRT Discharge

Entech LabNumber	Customer Sample Name/Field Point ID	Matrix	Method	Collect Date	Collect Time
59082-001	LRTO SW3-SW-7	Liquid	BOD - Alpha	1/10/2008	

Comments: BOD <350 mg/L

08A0544

Relinquished By:	Received By:	Date:	Time:
		01/11/08	10:44
Relinquished By:	Received By:	Date:	Time:
		1/11/8	1250
Relinquished By:	Received By:	Date:	Time:
		1/11/8	1525

Send the Report to: DATA@ENTECHLABS.COM

Site Location:

LEVIN RICHMOND TERMINAL  
402 WRIGHT AVENUE  
RICHMOND, CA

ENTECH  
COPY

## ENTECH ANALYTICAL LABS, INC.

3334 VICTOR COURT  
SANTA CLARA, CA 95054

Phone: (408) 588-0200  
Fax: (408) 588-0201

## CHAIN OF CUSTODY/ANALYSES REQUESTED

ELAP No. 2346

59082

CITY OF RICHMOND  
DISCHARGE SAMPLES

Attention to: Helen Mawhinney  
Company Name:  
Environmental Technical Services  
1548 Jacob Avenue  
San Jose, California 95118  
ENTECH ORDER NO:

PO No.

Project No./Name

LRT DISCHARGE

SW#3 → SW#7

TURNAROUND TIME: \_\_\_\_\_

SAMPLER: *T. Lester*

## CITY OF RICHMOND STORMWATER SEWER DISCHARGE SAMPLES

CLIENT ID	DATE	TIME	ENTECH No.	TSS	SPEC COND	BTEX	O&G	BOD	TTLC METALS	NOTE:
EPA Method				E160.2	E120.1	5030/8021	1664	5210	CU PB ZI ZN (ppm)	
RPL***				<300 mg/L	1.0 µmhos/c	<1.0 mg/L	<100 mg/L	<350 mg/L	E200.7 cu=0.6, pb=0.3, zinc=1.0, ni=0.5	
*LRTO SW3-SW-7	1/10/08	1530	-001	X	X		X	X	X	Field Comp
*LRTO SW3-SW-7	As Comp (007)					X				
*LRTO SW-3			002							LRTO SW-3
*LRTO SW-4			003							through
*LRTO SW-5			004							SW-7
*LRTO SW-6			005							Lab Comp.
*LRTO SW-7			006							
EQUIP WASH										

Rec'd @ Temperature = 74.2°C

\*LRTO SW-3 - SW-7 are to be composited in the lab as one sample for analyses for BTEX \*\*\* Entech, please use your detection limits when lower

\*\*LRTO SW-3 - SW-7 was composited in the field as one sample for analyses

Relinquished By:

J. NAVARRO, *T. Lester* 1/11/08print *T. Lester*signature *T. Lester*

date/time 1/10/08

0945

Relinquished By:

Received By:

Ron Anisett

print Elvin Kumar

signature *Elvin Kumar*

1/11/08 0837

date/time 01/11/08 0948

print

signature

date/time

print

signature

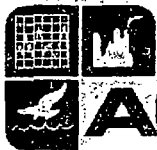
date/time





## **LABORATORY ANALYTICAL REPORTS**

March 27, 2008



Northern California

**ACCUTEST**

Laboratories

3334 Victor Court  
Santa Clara, CA 95054  
Phone: (408) 588-0200  
Fax: (408) 588-0201  
www.accutest.com

Helen Mawhinney  
Environmental Technical Services (ETS)  
1548 Jacob Ave  
San Jose, CA 95118

Lab Order Number: C0374  
Issued: 04/03/2008

P.O. Number: TL17479

Project Name: City of Richmond Discharge Samples  
Project Location: 402 Wright Ave, Levin Richmond Terminal

## Certificate of Analysis - Final Report

On March 27, 2008, samples were received under chain of custody for analysis.  
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Liquid	Composite Conductivity or Resistivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water n-Hexane extractable material (HEM): EPA 1664A Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater Subcontract - BOD - Alpha Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D VOCs: EPA 5030B / EPA 8021B

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
Subcontracted work is the responsibility of the subcontract laboratory, this includes turn-around-time and data quality.  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy  
Laboratory Director



Northern California

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Attn: Helen Mawhinney

Project Name: City of Richmond Discharge Samples

Project Location: 402 Wright Ave, Levin Richmond Termin

P.O. Number: TL17479

Samples Received: 03/27/2008

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: C0374-001 Sample ID: LRTO SW-3-SW-7

Matrix: Liquid Sample Date: 3/27/2008 1:05 PM

Conductivity or Resistivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Conductance	540		1.0	1.0	µmhos/cm	N/A	N/A	3/28/2008	WCOND080328

Analyzed by: RLazaro

Reviewed by: HDINH

Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Total Suspended Solids	7.0		1.0	5.0	mg/L	N/A	N/A	3/31/2008	WTSS080331

Analyzed by: Eblanco

Reviewed by: RLAZARO

Hexane extractable material (HEM): EPA 1664A

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Oil and Grease (HEM)	ND		1.0	5.0	mg/L	N/A	N/A	4/3/2008	WOGHEM080403

Analyzed by: RLazaro

Reviewed by: mfelix

Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Copper	0.0060		1.0	0.0050	mg/L	3/28/2008	WM080328	3/31/2008	WM080328
Lead	ND		1.0	0.0050	mg/L	3/28/2008	WM080328	3/31/2008	WM080328
Nickel	ND		1.0	0.0050	mg/L	3/28/2008	WM080328	3/31/2008	WM080328
Zinc	0.031		1.0	0.010	mg/L	3/28/2008	WM080328	3/31/2008	WM080328

Analyzed by: CTran

Reviewed by: HDINH

Lab #: C0374-007 Sample ID: LRTO SW-3-SW-7(Composite)

Matrix: Liquid Sample Date: 3/27/2008 1:05 PM

VOCs: EPA 5030B / EPA 8021B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/28/2008	WGC080328
Toluene	9.2		1.0	0.50	µg/L	N/A	N/A	3/28/2008	WGC080328
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/28/2008	WGC080328
Xylenes, Total	ND		1.0	1.0	µg/L	N/A	N/A	3/28/2008	WGC080328

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	110	65 - 135

Analyzed by: JABidog

Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

4/3/2008 2:59:56 PM - DTheesen



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Replicate - Liquid - Conductivity or Resistivity: EPA 120.1/Std. Methods (18th Ed.) 2510B for Wastewater/EPA 9050A for Groundwater and Water

QC Batch ID: WCOND080328

Validated by: HDINH - 04/03/08

QC Batch Analysis Date: 3/28/2008

Parameter		Sample Result	Replicate Result	Units	RPD	QC Type	RPD Limits
Conductance	C0374-001	535	530	$\mu$ mhos/cm	0.9	Replicate	25.0

Replicate - Liquid - Total Suspended Solids (TSS): EPA 160.2/Std. Methods (18th Ed.) 2540D

QC Batch ID: WTSS080331

Validated by: RLAZARO - 04/02/08

QC Batch Analysis Date: 3/31/2008

Parameter		Sample Result	Replicate Result	Units	RPD	QC Type	RPD Limits
Total Suspended Solids	C0374-001	7	7	mg/L	0.0	Replicate	25.0



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - VOCs: EPA 5030B / EPA 8021B

QC Batch ID: WGC080328

Validated by: MaiChiTu - 03/31/08

QC Batch Analysis Date: 3/28/2008

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	1.0	µg/L
Surrogate for Blank	% Recovery	Control Limits		
4-Bromofluorobenzene	99.2	65 - 135		



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 5030B / EPA 8021B

QC Batch ID: WGC080328

Reviewed by: MaiChiTu - 03/31/08

QC Batch ID Analysis Date: 3/28/2008

#### LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	4.0	3.92	µg/L	98.0	65 - 135
Ethyl Benzene	<0.50	4.0	4.02	µg/L	100	65 - 135
Methyl-t-butyl Ether	<2.0	4.0	3.70	µg/L	92.5	65 - 135
Toluene	<0.50	4.0	3.97	µg/L	99.2	65 - 135
Xylenes, total	<1.0	12	12.0	µg/L	100	65 - 135
Surrogate	% Recovery	Control Limits				
4-Bromofluorobenzene	101.0	65 - 135				

#### LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	4.0	3.98	µg/L	99.5	1.5	25.0	65 - 135
Ethyl Benzene	<0.50	4.0	4.07	µg/L	102	1.2	25.0	65 - 135
Methyl-t-butyl Ether	<2.0	4.0	3.83	µg/L	95.8	3.5	25.0	65 - 135
Toluene	<0.50	4.0	3.99	µg/L	99.8	0.50	25.0	65 - 135
Xylenes, total	<1.0	12	12.2	µg/L	102	1.7	25.0	65 - 135
Surrogate	% Recovery	Control Limits						
4-Bromofluorobenzene	101.0	65 - 135						



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Metals by ICP: EPA 3010A / EPA 6010B for Groundwater and Water - EPA 200.7 for Wastewater

QC Batch ID: WM080328

Reviewed by: HDINH - 03/28/08

QC/Prep Date: 3/28/2008

#### LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Antimony	<0.010	0.50	0.491	mg/L	98.2	85 - 115
Arsenic	<0.010	0.50	0.470	mg/L	93.9	85 - 115
Barium	<0.0050	0.50	0.496	mg/L	99.2	85 - 115
Beryllium	<0.0050	0.50	0.478	mg/L	95.7	85 - 115
Cadmium	<0.0020	0.50	0.480	mg/L	95.9	85 - 115
Chromium	<0.0050	0.50	0.507	mg/L	101	85 - 115
Cobalt	<0.0050	0.50	0.499	mg/L	99.8	85 - 115
Copper	<0.0050	0.50	0.500	mg/L	100	85 - 115
Lead	<0.0050	0.50	0.484	mg/L	96.8	85 - 115
Manganese	<0.0050	0.50	0.497	mg/L	99.4	85 - 115
Molybdenum	<0.0050	0.50	0.493	mg/L	98.6	85 - 115
Nickel	<0.0050	0.50	0.495	mg/L	98.9	85 - 115
Selenium	<0.020	0.50	0.458	mg/L	91.6	85 - 115
Silver	<0.0050	0.50	0.499	mg/L	99.8	85 - 115
Thallium	<0.020	0.50	0.457	mg/L	91.4	85 - 115
Tin	<0.050	1.0	0.972	mg/L	97.2	85 - 115
Titanium	<0.0020	0.50	0.514	mg/L	103	85 - 115
Vanadium	<0.0050	0.50	0.504	mg/L	101	85 - 115
Zinc	<0.010	0.50	0.478	mg/L	95.6	85 - 115

#### LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Antimony	<0.010	0.50	0.482	mg/L	96.4	1.9	25.0	85 - 115
Arsenic	<0.010	0.50	0.469	mg/L	93.8	0.15	25.0	85 - 115
Barium	<0.0050	0.50	0.500	mg/L	100	0.84	25.0	85 - 115
Beryllium	<0.0050	0.50	0.468	mg/L	93.6	2.2	25.0	85 - 115
Cadmium	<0.0020	0.50	0.470	mg/L	93.9	2.1	25.0	85 - 115
Chromium	<0.0050	0.50	0.498	mg/L	99.5	1.8	25.0	85 - 115
Cobalt	<0.0050	0.50	0.489	mg/L	97.7	2.1	25.0	85 - 115
Copper	<0.0050	0.50	0.492	mg/L	98.5	1.5	25.0	85 - 115
Lead	<0.0050	0.50	0.479	mg/L	95.8	1.0	25.0	85 - 115
Manganese	<0.0050	0.50	0.487	mg/L	97.4	2.1	25.0	85 - 115
Molybdenum	<0.0050	0.50	0.487	mg/L	97.5	1.1	25.0	85 - 115
Nickel	<0.0050	0.50	0.485	mg/L	97.0	2.0	25.0	85 - 115
Selenium	<0.020	0.50	0.436	mg/L	87.3	4.9	25.0	85 - 115
Silver	<0.0050	0.50	0.490	mg/L	98.1	1.7	25.0	85 - 115
Thallium	<0.020	0.50	0.451	mg/L	90.2	1.3	25.0	85 - 115
Tin	<0.050	1.0	0.971	mg/L	97.1	0.10	25.0	85 - 115
Titanium	<0.0020	0.50	0.504	mg/L	101	1.8	25.0	85 - 115
Vanadium	<0.0050	0.50	0.496	mg/L	99.1	1.7	25.0	85 - 115
Zinc	<0.010	0.50	0.467	mg/L	93.5	2.3	25.0	85 - 115



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - n-Hexane extractable material (HEM): EPA 1664A

QC Batch ID: WOGHEM080403

Reviewed by: mfelix - 04/03/08

QC Batch ID Analysis Date: 4/3/2008

#### LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Oil and Grease (HEM)	<5.0	40	34.2	mg/L	85.5	78 - 114

#### LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Oil and Grease (HEM)	<5.0	40	33.0	mg/L	82.5	3.6	18.0	78 - 114





*alpha*

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

ELAP Certificate Number 1551

09 April 2008

Accutest Northern California, Inc.

Attn: Simon Hague

2235 Route 130

Dayton, NJ 08810

RE: City Of Richmond Discharge Samples

Work Order: 08C1110

Enclosed are the results of analyses for samples received by the laboratory on 03/28/08 11:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Shauna L. Seely For Robbie C. Phillips  
Project Manager



Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

**CHEMICAL EXAMINATION REPORT**

Page 1 of 4

Accutest Northern California, Inc.

2235 Route 130

Dayton, NJ 08810

Attn: Simon Hague

Report Date: 04/09/08 09:03

Project No: C0374

Project ID: City Of Richmond Discharge Samples

Order Number

Receipt Date/Time

Client Code

Client PO/Reference

08C1110

03/28/2008 11:40

ACCUTEST

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C0374-001 LRTO-SW-3-SW-7	08C1110-01	Water	03/27/08 13:05	03/28/08 11:40

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

4/9/2008



# alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

## CHEMICAL EXAMINATION REPORT

Page 2 of 4

Accutest Northern California, Inc.

2235 Route 130

Dayton, NJ 08810

Attn: Simon Hague

Report Date: 04/09/08 09:03

Project No: C0374

Project ID: City Of Richmond Discharge Samples

Order Number

08C1110

Receipt Date/Time

03/28/2008 11:40

Client Code

ACCUTEST

Client PO/Reference

### Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
--------	-------	----------	----------	----------	--------	-----	------

00374-001 LRTO-SW-3-SW-7 (08C1110-01)

Sample Type: Water

Sampled: 03/27/08 13:05

Conventional Chemistry Parameters by APHA/EPA Methods

Biochemical Oxygen Demand

SM5210B

AC82801

03/28/08

04/08/08

1

300 mg/l

5.0

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

4/9/2008



# alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

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## CHEMICAL EXAMINATION REPORT

Page 3 of 4

Accutest Northern California, Inc.

2235 Route 130

Dayton, NJ 08810

Attn: Simon Hague

Report Date: 04/09/08 09:03

Project No: C0374

Project ID: City Of Richmond Discharge Samples

Order Number

Receipt Date/Time

Client Code

Client PO/Reference

AC1110

03/28/2008 11:40

ACCUTEST

### Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AC82801 - General Preparation</b>										
<b>Blank (AC82801-BLK1)</b>				Prepared: 03/28/08 Analyzed: 04/08/08						
Biochemical Oxygen Demand	ND	5.0	mg/l							
<b>Blank (AC82801-BLK2)</b>				Prepared: 03/28/08 Analyzed: 04/08/08						
Biochemical Oxygen Demand	ND	5.0	mg/l							
<b>LCS (AC82801-BS1)</b>				Prepared: 03/28/08 Analyzed: 04/08/08						
Biochemical Oxygen Demand	190	5.0	mg/l	200		95.0	80-120			
<b>LCS Dup (AC82801-BSD1)</b>				Prepared: 03/28/08 Analyzed: 04/08/08						
Biochemical Oxygen Demand	190	5.0	mg/l	200		95.0	80-120	0.00	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove  
Laboratory Director

4/9/2008



# Alpha

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

Service Center: 6398 Dougherty Rd., Suite 3, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

## CHEMICAL EXAMINATION REPORT

Page 4 of 4

Accutest Northern California, Inc.

2235 Route 130

Dayton, NJ 08810

Attn: Simon Hague

Report Date: 04/09/08 09:03

Project No: C0374

Project ID: City Of Richmond Discharge Samples

Order Number

Receipt Date/Time

Client Code

Client PO/Reference

BC1110

03/28/2008 11:40

ACCUTEST

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
PQL Practical Quantitation Limit



Accutest ID and PO#: C0374

Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

## Subcontract Chain of Custody

Subcontract Lab: Alpha

Date Sent: 3/27/08

Date Due: 04/10/08

04/10/08

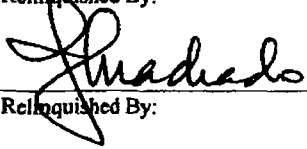
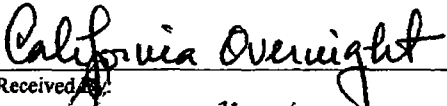

Project Name: City of Richmond Discharge Samples

Project Location: 402 Wright Ave, Levin Richmond Terminal

08C1110

Entech LabNumber	Customer Sample Name/Field Point ID	Matrix	Method	Collect Date	Collect Time
C0374-001	LRT0 SW-3-SW-7	Liquid	BOD - Alpha	3/27/2008	13:05

Comments:

Relinquished By: 	Received By: 	Date: 03-27-08	Time: 1700
Relinquished By:	Received By: 	Date: 3/23/08	Time: 11:40
Relinquished By:	Received By:	Date:	Time:

Send the Report to: DATA@ENTECHLABS.COM

LEVIN RICHMOND TERMINAL  
402 WRIGHT AVENUE  
RICHMOND, CA

ENTECH ANALYTICAL LABS, INC.

3334 VICTOR COURT Phone: (408) 588-0200  
SANTA CLARA, CA 95054 Fax: (408) 588-0201

CHAIN OF CUSTODY/ANALYSES REQUESTED

ELAP No. 2346

C0374

CITY OF RICHMOND  
DISCHARGE SAMPLES

Attention to: Helen Mawhinney  
Company Name:  
Environmental Technical Services  
1548 Jacob Avenue  
San Jose, California 95118  
ENTECH ORDER NO:

PO No.  
Project No./Name  
LRT DISCHARGE

TURNAROUND TIME: 5 day Routine

SAMPLER: H.M.

CITY OF RICHMOND STORMWATER SEWER DISCHARGE SAMPLES

CLIENT ID	DATE	TIME	ENTECH No.	TSS	SPEC COND	BTX	O&G	BOD	TTLC METALS	NOTE:
									CU PB <u>2</u> ZN (ppm)	
EPA Method				E160.2	E120.1	5030/8021	1664	5210	E200.7	
RPL***				<300 mg/L	1.0 $\mu$ mhos/c	<1.0 mg/L	<100 mg/L	<350 mg/L	cu=0.6, pb=0.3, zinc=1.0, ni=0.5	
**LRTO SW3-SW-7	3/27/08	1305	(5) -001	X	X		X	X	X	Field Comp
*LRTO SW3-SW-7			AS Composite (007)			X				
*LRTO SW-3			(2) -002							LRTO SW-3
*LRTO SW-4			(2) -003							through
*LRTO SW-5			(2) -004							SW-7
*LRTO SW-6			(2) -005							Lab Comp.
*LRTO SW-7			(2) -006							
EQUIP WASH										

\*LRTO SW-3 - SW-7 are to be composited in the lab as one sample for analyses for BTEX \*\*\* Entech, please use your detection limits when lower

\*\*LRTO SW-3 - SW-7 was composited in the field as one sample for analyses

Relinquished By: Helen Mawhinney 3/27-08  
print signature date/time

Received By: Ron Jawisek 3/27/08 1525  
print signature date/time

Relinquished By: Ron Jawisek 3/27/08 1550  
print signature date/time

Received By: Frederick 3/27/08 1550  
print signature date/time

2X250ML poly S N/P

1 Lit Amber (H2804)

1X250ML poly (w/HNO<sub>3</sub>) → to be acidified in Lab to pH<2.

Helen Mawhinney  
Environmental Technical Services (ETS)  
1548 Jacob Ave  
San Jose, CA 95118

Lab Order Number: C0375  
Issued: 03/31/2008

Project ID: EPA Discharge Sample  
Project Name: LRT Discharge 8081/8082  
Project Location: Levin Richmond Terminal, 402 Wright Avenue,  
CA

P.O. Number: TL17479


## Certificate of Analysis - Final Report

On March 27, 2008, a sample was received under chain of custody for analysis.  
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Liquid	Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
Subcontracted work is the responsibility of the subcontract laboratory, this includes turn-around-time and data quality.  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy  
Laboratory Director



Northern California

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Environmental Technical Services (ETS)

1548 Jacob Ave

San Jose, CA 95118

Attn: Helen Mawhinney

Project ID: EPA Discharge Sample

Project Name: LRT Discharge 8081/8082

Project Location: Levin Richmond Terminal, 402 Wright A

P.O. Number: TL17479

Samples Received: 03/27/2008

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: C0375-001

Sample ID: LRTO SW-3-SW-7

Matrix: Liquid

Sample Date: 3/27/2008

1:05 PM

Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Gamma-BHC (Lindane)	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Beta-BHC	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Heptachlor	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
delta-BHC	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Aldrin	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Heptachlor Epoxide	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Endosulfan I	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
1,4'-DDE	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Dieldrin	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Endrin	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
1,4'-DDD	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Endosulfan II	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
1,4'-DDT	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Endrin Aldehyde	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Endosulfan Sulfate	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Methoxychlor	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Endrin Ketone	ND		0.94	0.038	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Chlordane (technical)	ND		0.94	0.19	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328
Toxaphene	ND		0.94	0.19	µg/L	3/28/2008	PEW080328	3/28/2008	PEW080328

Surrogate

Surrogate Recovery

Control Limits (%)

Analyzed by: Nbocalan

Decachlorobiphenyl

83.1

43 - 121

Reviewed by: mtran

CBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Aroclor 1016	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1221	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1232	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1242	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1248	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1254	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1260	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1262	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328
Aroclor 1268	ND		0.94	0.094	µg/L	3/28/2008	PCW080328	3/29/2008	PCW080328

Surrogate

Surrogate Recovery

Control Limits (%)

Analyzed by: NBocalan

Decachlorobiphenyl

89.4

43 - 156

Reviewed by: mtran

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

3/31/2008 7:02:08 PM - dba



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

QC/Prep Batch ID: PCW080328

Validated by: mtran - 03/31/08

QC/Prep Date: 3/28/2008

Parameter	Result	DF	PQLR	Units
Aroclor 1016	ND	1	0.10	µg/L
Aroclor 1221	ND	1	0.10	µg/L
Aroclor 1232	ND	1	0.10	µg/L
Aroclor 1242	ND	1	0.10	µg/L
Aroclor 1248	ND	1	0.10	µg/L
Aroclor 1254	ND	1	0.10	µg/L
Aroclor 1260	ND	1	0.10	µg/L
Aroclor 1262	ND	1	0.10	µg/L
Aroclor 1268	ND	1	0.10	µg/L

Surrogate for Blank	% Recovery	Control Limits
Decachlorobiphenyl	91.1	43 - 156



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC/Prep Batch ID: PEW080328

Validated by: mtran - 03/31/08

QC/Prep Date: 3/28/2008

Parameter	Result	DF	PQLR	Units
4,4'-DDD	ND	1	0.040	µg/L
4,4'-DDE	ND	1	0.040	µg/L
4,4'-DDT	ND	1	0.040	µg/L
Aldrin	ND	1	0.040	µg/L
Alpha-BHC	ND	1	0.040	µg/L
Beta-BHC	ND	1	0.040	µg/L
Chlordane (technical)	ND	1	0.20	µg/L
delta-BHC	ND	1	0.040	µg/L
Dieldrin	ND	1	0.040	µg/L
Endosulfan I	ND	1	0.040	µg/L
Endosulfan II	ND	1	0.040	µg/L
Endosulfan Sulfate	ND	1	0.040	µg/L
Endrin	ND	1	0.040	µg/L
Endrin Aldehyde	ND	1	0.040	µg/L
Endrin Ketone	ND	1	0.040	µg/L
Gamma-BHC (Lindane)	ND	1	0.040	µg/L
Heptachlor	ND	1	0.040	µg/L
Heptachlor Epoxide	ND	1	0.040	µg/L
Methoxychlor	ND	1	0.040	µg/L
Toxaphene	ND	1	0.20	µg/L
Surrogate for Blank	% Recovery	Control Limits		
Decachlorobiphenyl	88.6	43 - 121		

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	92.9	43 - 156



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC Batch ID: PEW080328

Reviewed by: mtran - 03/31/08

QC/Prep Date: 3/28/2008

LCS						
Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0871	µg/L	87.1	35 - 130
Aldrin	<0.040	0.10	0.0833	µg/L	83.3	35 - 130
Dieldrin	<0.040	0.10	0.0857	µg/L	85.7	35 - 130
Endrin	<0.040	0.10	0.0875	µg/L	87.5	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.0867	µg/L	86.7	35 - 130
Heptachlor	<0.040	0.10	0.0800	µg/L	80.0	35 - 130

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	90.6	43 - 121

LCSD								
Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0926	µg/L	92.6	6.1	35.0	35 - 130
Aldrin	<0.040	0.10	0.0834	µg/L	83.4	0.12	35.0	35 - 130
Dieldrin	<0.040	0.10	0.0879	µg/L	87.9	2.5	35.0	35 - 130
Endrin	<0.040	0.10	0.0914	µg/L	91.4	4.4	35.0	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.0855	µg/L	85.5	1.4	35.0	35 - 130
Heptachlor	<0.040	0.10	0.0799	µg/L	79.9	0.13	35.0	35 - 130

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	88.5	43 - 121

**LEVIN RICHMOND TERMINAL  
402 WRIGHT AVENUE  
RICHMOND, CA**

ANALYTICAL LABS, INC.

**CHAIN OF CUSTODY/ANALYSES REQUESTED**

C0375

**● R COURT** Phone: (408) 588-0200  
**● RA, CA 95054** Fax: (408) 588-0201

ELAP No. 2346

EPA  
DISCHARGE SAMPLE

Name: Helen Mawhinney  
 Address: Mental Technical Services  
 Avenue

PO No.  
Project No./Name  
**LRT DISCHARGE**  
~~Pesticide~~  
8081/8082

TURNAROUND TIME: 3 days

**SAMPLER:**

**CITY OF RICHMOND STORMWATER SEWER DISCHARGE SAMPLES FOR EPA**

[illegible]

SW-7 was composited in the field as one sample for analyses

signature Robert M. Mawhney date/time 3-27-08

Received By:

Ron Janisch  
print

signature

3/27/02 1521  
date/time

signature 3/27/08 1550

Received By:

Received By: Shachar  
print \_\_\_\_\_ S \_\_\_\_\_

signature

3/27/08 1550  
date/time

**Site Location:**

**LEVIN RICHMOND TERMINAL  
402 WRIGHT AVENUE  
RICHMOND, CA**

**ENTECH ANALYTICAL LABS, INC.**

3334 VICTOR COURT

SANTA CLARA, CA 95054

**Phone: (408) 588-0200**

Fax: (408) 588-0201

**CHAIN OF CUSTODY/ANALYSES REQUESTED**

ELAP No. 2346

EPA

DISCHARGE SAMPLE

C0375

Attention to: Helen Mawhinney

**Company Name:**

## Environmental Technical Services

1548 Jacob Avenue

PO No.

Project No./Name

**LRT DISCHARGE**

~~Outright~~

7/20/1987

TURNAROUND TIME:

## 5 day Routine

San Jose, California 95118

ENTECH ORDER NO:

**SAMPLER:**

**CITY OF RICHMOND STORMWATER SEWER DISCHARGE SAMPLES FOR EPA**

[illegible]

**LRT0 SW-3 - SW-7 was composited in the field as one sample for analyses**

Relinquished By:

Heben Maubance  
print / sin

signature

date/time

Received By:

Ken Janis  
print

print

3/27/  
date/time

Relinquished By:

print

signature

date/time

Received By:

Blackdo JOSEPH HAT  
print signature

**print**

signature

date/time



## **LABORATORY ANALYTICAL REPORTS**

April 28, 2008





Northern California

**ACCUTEST**

L a b o r a t o r i e s

3334 Victor Court  
Santa Clara, CA 95054  
Phone: (408) 588-0200  
Fax: (408) 588-0201  
www.accutest.com

Helen Mawhinney  
Environmental Technical Services (ETS)  
1548 Jacob Ave  
San Jose, CA 95118

Lab Order Number: C0732  
Issued: 05/05/2008

P.O. Number: 17514

Project Name: LRT Discharge April EPA  
Project Location: Levin Richmond Terminal

## Certificate of Analysis - Final Report

On April 29, 2008, a sample was received under chain of custody for analysis.  
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Liquid	Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
Subcontracted work is the responsibility of the subcontract laboratory, this includes turn-around-time and data quality.  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy  
Laboratory Director

Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Environmental Technical Services (ETS)  
1548 Jacob Ave  
San Jose, CA 95118  
Attn: Helen Mawhinney

Project Name: LRT Discharge April EPA  
Project Location: Levin Richmond Terminal

P.O. Number: 17514  
Samples Received: 04/29/2008  
Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: C0732-001 Sample ID: SW3-SW-7 Matrix: Liquid Sample Date: 4/28/2008 7:21 PM

### Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Gamma-BHC (Lindane)	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Beta-BHC	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Heptachlor	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
delta-BHC	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Aldrin	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Heptachlor Epoxide	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Endosulfan I	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
2,4'-DDE	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Dieldrin	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Endrin	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
2,4'-DDD	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Endosulfan II	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
2,4'-DDT	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Endrin Aldehyde	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Endosulfan Sulfate	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Methoxychlor	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Endrin Ketone	ND		0.94	0.038	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Chlordane (technical)	ND		0.94	0.19	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501
Toxaphene	ND		0.94	0.19	µg/L	5/1/2008	PEW080501	5/3/2008	PEW080501

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: Mtran
Decachlorobiphenyl	76.7	43 - 121	Reviewed by: bdhabalia

### CBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Aroclor 1016	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1221	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1232	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1242	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1248	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1254	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1260	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1262	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501
Aroclor 1268	ND		0.94	0.094	µg/L	5/1/2008	PCW080501	5/5/2008	PCW080501

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: MTran
Decachlorobiphenyl	87.5	43 - 156	Reviewed by: bdhabalia

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

5/5/2008 12:27:49 PM - mfelix



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - PCBs: EPA 3510C / EPA 8082A for Groundwater and Water / EPA 608 for Wastewater

QC/Prep Batch ID: PCW080501

Validated by: bdhabalia - 05/05/08

QC/Prep Date: 5/1/2008

Parameter	Result	DF	PQLR	Units
Aroclor 1016	ND	1	0.10	µg/L
Aroclor 1221	ND	1	0.10	µg/L
Aroclor 1232	ND	1	0.10	µg/L
Aroclor 1242	ND	1	0.10	µg/L
Aroclor 1248	ND	1	0.10	µg/L
Aroclor 1254	ND	1	0.10	µg/L
Aroclor 1260	ND	1	0.10	µg/L
Aroclor 1262	ND	1	0.10	µg/L
Aroclor 1268	ND	1	0.10	µg/L
Surrogate for Blank	% Recovery	Control Limits		
Decachlorobiphenyl	126	43 - 156		



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC/Prep Batch ID: PEW080501

Validated by: bdhabalia - 05/05/08

QC/Prep Date: 5/1/2008

Parameter	Result	DF	PQLR	Units
4,4'-DDD	ND	1	0.040	µg/L
4,4'-DDE	ND	1	0.040	µg/L
4,4'-DDT	ND	1	0.040	µg/L
Aldrin	ND	1	0.040	µg/L
Alpha-BHC	ND	1	0.040	µg/L
Beta-BHC	ND	1	0.040	µg/L
Chlordane (technical)	ND	1	0.20	µg/L
delta-BHC	ND	1	0.040	µg/L
Dieldrin	ND	1	0.040	µg/L
Endosulfan I	ND	1	0.040	µg/L
Endosulfan II	ND	1	0.040	µg/L
Endosulfan Sulfate	ND	1	0.040	µg/L
Endrin	ND	1	0.040	µg/L
Endrin Aldehyde	ND	1	0.040	µg/L
Endrin Ketone	ND	1	0.040	µg/L
Gamma-BHC (Lindane)	ND	1	0.040	µg/L
Heptachlor	ND	1	0.040	µg/L
Heptachlor Epoxide	ND	1	0.040	µg/L
Methoxychlor	ND	1	0.040	µg/L
Toxaphene	ND	1	0.20	µg/L
Surrogate for Blank	% Recovery	Control Limits		
Decachlorobiphenyl	91.6	43 - 121		



Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Organochlorine Pesticides: EPA 3510C / EPA 8081A for Groundwater and Water / EPA 608 for Wastewater

QC Batch ID: PEW080501

Reviewed by: bdhabalia - 05/05/08

QC/Prep Date: 5/1/2008

#### LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0947	µg/L	94.7	35 - 130
Aldrin	<0.040	0.10	0.0909	µg/L	90.9	35 - 130
Dieldrin	<0.040	0.10	0.0929	µg/L	92.9	35 - 130
Endrin	<0.040	0.10	0.108	µg/L	108	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.0972	µg/L	97.2	35 - 130
Heptachlor	<0.040	0.10	0.0932	µg/L	93.2	35 - 130

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	95.3	43 - 121

#### LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.040	0.10	0.0991	µg/L	99.1	4.5	35.0	35 - 130
Aldrin	<0.040	0.10	0.0937	µg/L	93.7	3.0	35.0	35 - 130
Dieldrin	<0.040	0.10	0.0946	µg/L	94.6	1.8	35.0	35 - 130
Endrin	<0.040	0.10	0.110	µg/L	110	2.2	35.0	35 - 130
Gamma-BHC (Lindane)	<0.040	0.10	0.101	µg/L	101	4.0	35.0	35 - 130
Heptachlor	<0.040	0.10	0.0967	µg/L	96.7	3.7	35.0	35 - 130

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	96.9	43 - 121

Site Location:

LEVIN RICHMOND TERMINAL  
402 WRIGHT AVENUE  
RICHMOND, CA

**ENTECH ANALYTICAL LABS, INC.**

3334 VICTOR COURT Phone: (408) 588-0200  
SANTA CLARA, CA 95054 Fax: (408) 588-0201

**CHAIN OF CUSTODY/ANALYSES REQUESTED**

ELAP No. 2346

EPA  
DISCHARGE SAMPLE

Attention to: Helen Mawhinney  
Company Name:  
Environmental Technical Services  
1548 Jacob Avenue

San Jose, California 95118  
ENTECH ORDER NO:

PO No. 17514  
Project No./Name  
LRT DISCHARGE  
April EPA

TURNAROUND TIME: 5 day  
Routine

SAMPLER:

**CITY OF RICHMOND STORMWATER SEWER DISCHARGE SAMPLES FOR EPA**

CLIENT ID	DATE	TIME	ENTECH No.	PESTICIDES	Polychlorinated Biphenyls	
	4/28/08	07:21				
EPA Method				8081	8082	
LRT0 SW3-SW-7		-001		X	X	
Two amber liters						
						***

LRT0 SW-3 - SW-7 was composited in the field as one sample for analyses

Relinquished By:

Helen Mawhinney 4/28/08 19:21  
print signature date/time

Received By:

ETS Fridge 4/28/08 19:21  
print signature date/time

Relinquished By:

Helen Mawhinney 4/29/08  
print signature date/time  
Ron Janssen 4/29/08 11:50

Received By:

Ron Janssen 4/29/08 11:27  
print signature date/time